United States Environmental Protection Agency
Region 9 Laboratory

1337 S. 46th Street Building 201
Richmond, CA 94804

Date: 2/14/2012

Subject: **Analytical Testing Results - Project R33911**
SDG: 12039A

From: **Brenda Bettencourt, Director**
EPA Region 9 Laboratory
MTS-2

To: **Richard Fetzer**
US EPA Region 3, Eastern Response Branch
3HS31

Attached are the results from the analysis of samples from the **Dimock Residential Groundwater** project. These data have been reviewed in accordance with EPA Region 9 Laboratory policy.

A full documentation package for these data, including raw data and sample custody documentation, is on file at the EPA Region 9 Laboratory. If you would like to request additional review and/or validation of the data, please contact Eugenia McNaughton at the Region 9 Quality Assurance Office.

If you have any questions, please ask for Richard Bauer, the Lab Project Manager at (510)412-2300.

Analyses included in this report:

Dissolved Hydrocarbon Gases by GC

DIM0279368

01484

United States Environmental Protection Agency
Region 9 Laboratory

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Richard Fetzer	**US EPA Region 3, Eastern Response Branch**	**SDG:** 12039A
Project Number: R33911	**100 Gypsum Road**	**Reported:** 02/14/12 16:36
Project: Dimock Residential Groundwater	**Stroudsburg PA, 18360**	

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Collected	Date Received
HW31	1202020-03	Water	02/06/12 18:20	02/08/12 09:50
HW31-P	1202020-04	Water	02/06/12 18:28	02/08/12 09:50
HW31z	1202020-05	Water	02/06/12 18:20	02/08/12 09:50
TB25	1202020-06	Water	02/06/12 10:25	02/08/12 09:50
FB11	1202020-07	Water	02/06/12 14:36	02/08/12 09:50
HW30	1202020-08	Water	02/06/12 14:34	02/08/12 09:50
HW30-P	1202020-09	Water	02/06/12 15:00	02/08/12 09:50
TB26	1202020-10	Water	02/06/12 10:30	02/08/12 09:50
HW15a	1202020-11	Water	02/07/12 10:47	02/08/12 09:50
HW15a-P	1202020-12	Water	02/07/12 10:55	02/08/12 09:50
TB28	1202020-13	Water	02/07/12 07:05	02/08/12 09:50
FB12	1202023-01	Water	02/07/12 13:35	02/09/12 10:00
HW51	1202023-02	Water	02/07/12 13:48	02/09/12 10:00
HW51-P	1202023-03	Water	02/07/12 13:56	02/09/12 10:00
TB27	1202023-04	Water	02/07/12 07:00	02/09/12 10:00
HW47	1202023-05	Water	02/08/12 11:50	02/09/12 10:00
HW47-P	1202023-06	Water	02/08/12 12:25	02/09/12 10:00
TB29	1202023-07	Water	02/08/12 07:05	02/09/12 10:00
FB13	1202023-08	Water	02/08/12 09:00	02/09/12 10:00
HW38	1202023-09	Water	02/08/12 10:41	02/09/12 10:00
HW38-P	1202023-10	Water	02/08/12 10:52	02/09/12 10:00
TB30	1202023-11	Water	02/08/12 07:10	02/09/12 10:00

SDG ID 12039A

Small amounts of methane were detected in the method blanks, field blanks and trip blanks. Field sample results are flagged as estimates if they do not exceed levels found in associated blanks by at least five times.

Samples 1202023-08, -09, -10, and -11 were received at 8 degrees C, which is above the recommended temperature range of 2 - 6 degrees C. No significant impact is anticipated on the sample results.

Work Order(s)

1202020

1202023

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Project Number: R33911	**100 Gypsum Road**	**Reported:** 02/14/12 16:36
Project: Dimock Residential Groundwater	**Stroudsburg PA, 18360**	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1202020-03									**Water - Sampled: 02/06/12 18:20**
Sample ID: HW31									**Dissolved Gases by RSK-175**
Methane	RE1	17,000		130	ug/L	B2B0041	02/09/12	02/09/12	RSK-175/SOP325
Ethane		7.3		1.2	"	B2B0032	02/08/12	02/08/12	RSK-175/SOP325
Ethene		ND	U	1.1	"	"	"	"	RSK-175/SOP325
Surrogate: Acetylene			116 %	*66.4-153%*		"	"	"	
Surrogate: Acetylene	*RE1*		116 %	*66.4-153%*		*B2B0041*	*02/09/12*	*02/09/12*	
Lab ID: 1202020-04									**Water - Sampled: 02/06/12 18:28**
Sample ID: HW31-P									**Dissolved Gases by RSK-175**
Methane		73		1.2	ug/L	B2B0032	02/08/12	02/08/12	RSK-175/SOP325
Ethane		ND	U	1.2	"	"	"	"	RSK-175/SOP325
Ethene		ND	U	1.1	"	"	"	"	RSK-175/SOP325
Surrogate: Acetylene			116 %	*66.4-153%*		"	"	"	
Lab ID: 1202020-05									**Water - Sampled: 02/06/12 18:20**
Sample ID: HW31z									**Dissolved Gases by RSK-175**
Methane	RE1	15,000		130	ug/L	B2B0041	02/09/12	02/09/12	RSK-175/SOP325
Ethane		7.5		1.2	"	B2B0032	02/08/12	02/08/12	RSK-175/SOP325
Ethene		ND	U	1.1	"	"	"	"	RSK-175/SOP325
Surrogate: Acetylene			115 %	*66.4-153%*		"	"	"	
Surrogate: Acetylene	*RE1*		111 %	*66.4-153%*		*B2B0041*	*02/09/12*	*02/09/12*	
Lab ID: 1202020-06									**Water - Sampled: 02/06/12 10:25**
Sample ID: TB25									**Dissolved Gases by RSK-175**
Methane		1.3	B1, J	1.2	ug/L	B2B0032	02/08/12	02/09/12	RSK-175/SOP325
Ethane		ND	U	1.2	"	"	"	"	RSK-175/SOP325
Ethene		ND	U	1.1	"	"	"	"	RSK-175/SOP325
Surrogate: Acetylene			115 %	*66.4-153%*		"	"	"	
Lab ID: 1202020-07									**Water - Sampled: 02/06/12 14:36**
Sample ID: FB11									**Dissolved Gases by RSK-175**
Methane		1.1	B1, C1, J	1.2	ug/L	B2B0032	02/08/12	02/09/12	RSK-175/SOP325
Ethane		ND	U	1.2	"	"	"	"	RSK-175/SOP325
Ethene		ND	U	1.1	"	"	"	"	RSK-175/SOP325
Surrogate: Acetylene			113 %	*66.4-153%*		"	"	"	
Lab ID: 1202020-08									**Water - Sampled: 02/06/12 14:34**
Sample ID: HW30									**Dissolved Gases by RSK-175**
Methane		120		1.2	ug/L	B2B0032	02/08/12	02/09/12	RSK-175/SOP325
Ethane		ND	U	1.2	"	"	"	"	RSK-175/SOP325
Ethene		ND	U	1.1	"	"	"	"	RSK-175/SOP325

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Project Number: R33911	**100 Gypsum Road**	**Reported:** 02/14/12 16:36
Project: Dimock Residential Groundwater	**Stroudsburg PA, 18360**	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1202020-08									**Water - Sampled: 02/06/12 14:34**
Sample ID: HW30									**Dissolved Gases by RSK-175**
Surrogate: Acetylene			116 %	*66.4-153%*		*B2B0032*	*02/08/12*	*02/09/12*	
Lab ID: 1202020-09									**Water - Sampled: 02/06/12 15:00**
Sample ID: HW30-P									**Dissolved Gases by RSK-175**
Methane		92		1.2	ug/L	B2B0032	02/08/12	02/09/12	RSK-175/SOP325
Ethane		ND	U	1.2	"	"	"	"	RSK-175/SOP325
Ethene		ND	U	1.1	"	"	"	"	RSK-175/SOP325
Surrogate: Acetylene			114 %	*66.4-153%*		"	"	"	
Lab ID: 1202020-10									**Water - Sampled: 02/06/12 10:30**
Sample ID: TB26									**Dissolved Gases by RSK-175**
Methane		1.0	B1, C1, J	1.2	ug/L	B2B0032	02/08/12	02/09/12	RSK-175/SOP325
Ethane		ND	U	1.2	"	"	"	"	RSK-175/SOP325
Ethene		ND	U	1.1	"	"	"	"	RSK-175/SOP325
Surrogate: Acetylene			113 %	*66.4-153%*		"	"	"	
Lab ID: 1202020-11									**Water - Sampled: 02/07/12 10:47**
Sample ID: HW15a									**Dissolved Gases by RSK-175**
Methane	RE1	14,000		97	ug/L	B2B0041	02/09/12	02/09/12	RSK-175/SOP325
Ethane		130		1.2	"	B2B0032	02/08/12	02/09/12	RSK-175/SOP325
Ethene		ND	U	1.1	"	"	"	"	RSK-175/SOP325
Surrogate: Acetylene			112 %	*66.4-153%*		"	"	"	
Surrogate: Acetylene	*RE1*		118 %	*66.4-153%*		*B2B0041*	*02/09/12*	*02/09/12*	
Lab ID: 1202020-12									**Water - Sampled: 02/07/12 10:55**
Sample ID: HW15a-P									**Dissolved Gases by RSK-175**
Methane		27		1.2	ug/L	B2B0032	02/08/12	02/09/12	RSK-175/SOP325
Ethane		ND	U	1.2	"	"	"	"	RSK-175/SOP325
Ethene		ND	U	1.1	"	"	"	"	RSK-175/SOP325
Surrogate: Acetylene			111 %	*66.4-153%*		"	"	"	
Lab ID: 1202020-13									**Water - Sampled: 02/07/12 07:05**
Sample ID: TB28									**Dissolved Gases by RSK-175**
Methane		1.1	B1, C1, J	1.2	ug/L	B2B0032	02/08/12	02/09/12	RSK-175/SOP325
Ethane		ND	U	1.2	"	"	"	"	RSK-175/SOP325
Ethene		ND	U	1.1	"	"	"	"	RSK-175/SOP325
Surrogate: Acetylene			115 %	*66.4-153%*		"	"	"	
Lab ID: 1202023-01									**Water - Sampled: 02/07/12 13:35**
Sample ID: FB12									**Dissolved Gases by RSK-175**
Methane		0.9	B1, C1, J	1.2	ug/L	B2B0041	02/09/12	02/09/12	RSK-175/SOP325
Ethane		ND	U	1.2	"	"	"	"	RSK-175/SOP325

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Project Number: R33911	**100 Gypsum Road**	**Reported:** 02/14/12 16:36
Project: Dimock Residential Groundwater	**Stroudsburg PA, 18360**	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1202023-01									**Water - Sampled: 02/07/12 13:35**
Sample ID: FB12									**Dissolved Gases by RSK-175**
Ethene		ND	U	1.1	ug/L	B2B0041	02/09/12	02/09/12	RSK-175/SOP325
Surrogate: Acetylene			114 %	*66.4-153%*		"	"	"	
Lab ID: 1202023-02									**Water - Sampled: 02/07/12 13:48**
Sample ID: HW51									**Dissolved Gases by RSK-175**
Methane	RE1	3,400		39	ug/L	B2B0053	02/12/12	02/12/12	RSK-175/SOP325
Ethane		75		1.2	"	B2B0041	02/09/12	02/09/12	RSK-175/SOP325
Ethene		ND	U	1.1	"	"	"	"	RSK-175/SOP325
Surrogate: Acetylene			110 %	*66.4-153%*		"	"	"	
Surrogate: Acetylene	*RE1*		117 %	*66.4-153%*		*B2B0053*	*02/12/12*	*02/12/12*	
Lab ID: 1202023-03									**Water - Sampled: 02/07/12 13:56**
Sample ID: HW51-P									**Dissolved Gases by RSK-175**
Methane	RE1	5,600		39	ug/L	B2B0053	02/12/12	02/12/12	RSK-175/SOP325
Ethane		100		1.2	"	B2B0041	02/09/12	02/09/12	RSK-175/SOP325
Ethene		ND	U	1.1	"	"	"	"	RSK-175/SOP325
Surrogate: Acetylene			112 %	*66.4-153%*		"	"	"	
Surrogate: Acetylene	*RE1*		115 %	*66.4-153%*		*B2B0053*	*02/12/12*	*02/12/12*	
Lab ID: 1202023-04									**Water - Sampled: 02/07/12 07:00**
Sample ID: TB27									**Dissolved Gases by RSK-175**
Methane		0.9	B1, C1, J	1.2	ug/L	B2B0041	02/09/12	02/09/12	RSK-175/SOP325
Ethane		ND	U	1.2	"	"	"	"	RSK-175/SOP325
Ethene		ND	U	1.1	"	"	"	"	RSK-175/SOP325
Surrogate: Acetylene			121 %	*66.4-153%*		"	"	"	
Lab ID: 1202023-05									**Water - Sampled: 02/08/12 11:50**
Sample ID: HW47									**Dissolved Gases by RSK-175**
Methane	RE1	7,900		64	ug/L	B2B0053	02/12/12	02/12/12	RSK-175/SOP325
Ethane		ND	U	1.2	"	B2B0041	02/09/12	02/09/12	RSK-175/SOP325
Ethene		ND	U	1.1	"	"	"	"	RSK-175/SOP325
Surrogate: Acetylene			108 %	*66.4-153%*		"	"	"	
Surrogate: Acetylene	*RE1*		118 %	*66.4-153%*		*B2B0053*	*02/12/12*	*02/12/12*	
Lab ID: 1202023-06									**Water - Sampled: 02/08/12 12:25**
Sample ID: HW47-P									**Dissolved Gases by RSK-175**
Methane	RE1	10,000		64	ug/L	B2B0053	02/12/12	02/12/12	RSK-175/SOP325
Ethane		0.6	C1, J	1.2	"	B2B0041	02/09/12	02/09/12	RSK-175/SOP325
Ethene		ND	U	1.1	"	"	"	"	RSK-175/SOP325
Surrogate: Acetylene	*RE1*		115 %	*66.4-153%*		*B2B0053*	*02/12/12*	*02/12/12*	
Surrogate: Acetylene			106 %	*66.4-153%*		*B2B0041*	*02/09/12*	*02/09/12*	

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Project Number: R33911	**100 Gypsum Road**	**Reported:** 02/14/12 16:36
Project: Dimock Residential Groundwater	**Stroudsburg PA, 18360**	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1202023-06									**Water - Sampled: 02/08/12 12:25**
Lab ID: 1202023-07									**Water - Sampled: 02/08/12 07:05**
Sample ID: TB29									**Dissolved Gases by RSK-175**
Methane		0.8	B1, C1, J	1.2	ug/L	B2B0041	02/09/12	02/09/12	RSK-175/SOP325
Ethane		ND	U	1.2	"	"	"	"	RSK-175/SOP325
Ethene		ND	U	1.1	"	"	"	"	RSK-175/SOP325
Surrogate: Acetylene			113 %	*66.4-153%*		"	"	"	
Lab ID: 1202023-08									**Water - Sampled: 02/08/12 09:00**
Sample ID: FB13									**Dissolved Gases by RSK-175**
Methane		0.9	B1, C1, J	1.2	ug/L	B2B0041	02/09/12	02/09/12	RSK-175/SOP325
Ethane		ND	U	1.2	"	"	"	"	RSK-175/SOP325
Ethene		ND	U	1.1	"	"	"	"	RSK-175/SOP325
Surrogate: Acetylene			113 %	*66.4-153%*		"	"	"	
Lab ID: 1202023-09									**Water - Sampled: 02/08/12 10:41**
Sample ID: HW38									**Dissolved Gases by RSK-175**
Methane		5.0		1.2	ug/L	B2B0041	02/09/12	02/09/12	RSK-175/SOP325
Ethane		ND	U	1.2	"	"	"	"	RSK-175/SOP325
Ethene		ND	U	1.1	"	"	"	"	RSK-175/SOP325
Surrogate: Acetylene			113 %	*66.4-153%*		"	"	"	
Lab ID: 1202023-10									**Water - Sampled: 02/08/12 10:52**
Sample ID: HW38-P									**Dissolved Gases by RSK-175**
Methane		3.8	B1, J	1.2	ug/L	B2B0041	02/09/12	02/09/12	RSK-175/SOP325
Ethane		ND	U	1.2	"	"	"	"	RSK-175/SOP325
Ethene		ND	U	1.1	"	"	"	"	RSK-175/SOP325
Surrogate: Acetylene			112 %	*66.4-153%*		"	"	"	
Lab ID: 1202023-11									**Water - Sampled: 02/08/12 07:10**
Sample ID: TB30									**Dissolved Gases by RSK-175**
Methane		0.7	B1, C1, J	1.2	ug/L	B2B0041	02/09/12	02/09/12	RSK-175/SOP325
Ethane		ND	U	1.2	"	"	"	"	RSK-175/SOP325
Ethene		ND	U	1.1	"	"	"	"	RSK-175/SOP325
Surrogate: Acetylene			115 %	*66.4-153%*		"	"	"	

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Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B2B0032 - RSK175 - Dissolved HC Gases										**Prepared & Analyzed: 02/08/12**
										Dissolved Gases by RSK-175 - Quality Control
Blank (B2B0032-BLK1)										
Methane	0.9	C1, J	1.2	ug/L						
Ethane	ND	U	1.2	"						
Ethene	ND	U	1.1	"						
Surrogate: Acetylene	*78.5*			"	*66.5*		118	*66.4-153*		
LCS (B2B0032-BS1)										
Methane	47.7		1.2	ug/L	44.1		108	70-130		200
Ethane	93.9		1.2	"	83.2		113	77-137		200
Ethene	88		1.1	"	78.3		112	78-138		200
Surrogate: Acetylene	*79.2*			"	*72.0*		110	*66.4-153*		
Batch B2B0041 - RSK175 - Dissolved HC Gases										**Prepared & Analyzed: 02/09/12**
										Dissolved Gases by RSK-175 - Quality Control
Blank (B2B0041-BLK1)										
Methane	0.7	C1, J	1.2	ug/L						
Ethane	ND	U	1.2	"						
Ethene	ND	U	1.1	"						
Surrogate: Acetylene	*73.5*			"	*66.5*		111	*66.4-153*		
LCS (B2B0041-BS1)										
Methane	44.9		1.2	ug/L	44.1		102	70-130		200
Ethane	88.6		1.2	"	83.2		106	77-137		200
Ethene	83.2		1.1	"	78.3		106	78-138		200
Surrogate: Acetylene	*76.2*			"	*72.0*		106	*66.4-153*		
Batch B2B0053 - RSK175 - Dissolved HC Gases										**Prepared & Analyzed: 02/12/12**
										Dissolved Gases by RSK-175 - Quality Control
Blank (B2B0053-BLK1)										
Methane	0.7	C1, J	1.2	ug/L						
Ethane	ND	U	1.2	"						
Ethene	ND	U	1.1	"						
Surrogate: Acetylene	*75.9*			"	*66.5*		114	*66.4-153*		
LCS (B2B0053-BS1)										
Methane	47		1.2	ug/L	44.1		107	70-130		200
Ethane	92.9		1.2	"	83.2		112	77-137		200
Ethene	87		1.1	"	78.3		111	78-138		200
Surrogate: Acetylene	*78.9*			"	*72.0*		110	*66.4-153*		

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Qualifiers and Comments

J The reported result for this analyte should be considered an estimated value.

C1 The reported concentration for this analyte is below the quantitation limit.

B1 The concentration of this analyte found in this sample was less than five times the concentration found in the associated method blank.

U Not Detected

NR Not Reported

RE1, RE2, etc: Result is from a sample re-analysis.

01491

ICF International / Laboratory Data Consultants
Environmental Services Assistance Team, Region 9
1337 South 46th Street, Building 201, Richmond, CA 94804-4698
Phone: (510) 412-2300 Fax: (510) 412-2304

DATE: February 14, 2012

TO: Richard Bauer, Chemistry TOM, EPA Region 9, Laboratory Section, MTS-2

FROM: Ziyad Rajabi, Organic Group Leader

SUBJECT: Analytical Results for TDF 01001084

As assigned under EPA Contract No. EP-W-06-041, TDF 01001084, ESAT completed analysis of 22 water samples for the Dimock Residential Groundwater Site project, Case R33911, SDG 12039A, Work Orders 1202020 and 1202023 for dissolved gasses following EPA Region 9 Laboratory SOP 325 based on method RSK-175. The draft analytical report and raw data package are attached.

If you have any questions regarding this information please contact me at extension 22390.

G:\USER\ESAT\# LAB DATA Deliverables\R33911\12039A-DissGasses-14507.docx

EPA Region 9 Laboratory

DATA PACKAGE

Analysis:	**Dissolved Gasses**
Project Number:	**R33911**
SDG Number:	**12039A**
Work Order:	**1202020 and 1202023**
ESAT DCN:	**14507**

Contents

- **Review Forms**
- **Tracking Forms**
- ***Sample Preparation***
- **Data**
  -Initial Calibration Data
  -Sample Data
- ***Miscellaneous Data***
- **Standard Records**
- ***Canister Certification Data***

Sections in italics are included as applicable

REVIEW FORMS

00001B

81494

General Project Management and ESAT Contractor Oversight Review

Project Number: R33911

SDG: 12039A

Analysis: dissolved gasses

Number of Pages: 226

Reviewer: Bauer

- ☑ Review project notes and requirements (including TDF) and verify that correct analytical procedures and any special instructions were followed. Note any significant deviations or omissions in report narrative or return to contractor for correction.
- ☑ Review project memo field for each work order and include information pertinent to data users in report narrative. (Information important only to chemist reviewing the raw data package should be included in data package, but not in the report narrative).
- ☑ Review chain of custody documentation and verify that information in report corresponds correctly. Verify that any sample shipping or handling issues are properly documented and reported.
- ☑ Review analytical report and QC report and verify that qualifier flags for holding times, sample handling, surrogates, blanks, blank spikes, matrix QC, and calibration range have been appropriately applied.
- ☑ Review LIMS Data Entry table for unaddressed outliers.
- ☑ Verify that all major sections of data package are present.

Comments: Prep dates, analysis dates for re-extracts need to be corrected. Re-print bench sheets. Correct prep times. Fixed. RPM 2/14/12

Reviewer Signature RM Date 2/14/12

G:\USER\ESAT\# LAB DATA Deliverables\R33911\12039A-DissGasses-14507.docx

00002A

DIM0279368

DIM0279379

01495

ESAT Region 9 | **ICF International**
Case: R33911 | **Analysis:** Dissolved Gasses | **TDF:** 01001084 | **Matrix:** water
DCN: 14507 | **Site:** Dimock Residential Groundwater Site | **SDG:** 12039A

ESAT REGION 9 DATA PACKAGE TECHNICAL REVIEW GUIDE

Reviewer: Package Prep (P): R H Technical (T): JE Final (F): JE
Date: 2/13/12 Date: 2/14/12 Date: 2-14-12

P T F N/A (indicates that the item is present and reviewed for accuracy and completeness)

Report Section

- ☑ ☑ ☑ ESAT Cover Memo (original)
- ☑ ☐ ☑ TDF included and requirements met (e.g. project analytes, project QLs, special procedures)
- ☑ ☑ ☑ Draft LIMS Report

Data Package Cover

- ☐ ☐ ☑ Case, SDG, Work Order(s), TDF#-DCN [First numbered page in the data package]

Review Forms

- ☑ ☑ ☑ EPA Review Form and Technical Review Guide included and complete.
- ☑ ☑ ☑ ☐ LIMS memo field; include as applicable.
- ☐ ☐ ☐ ☑ Discrepancy form(s) include as applicable
- ☑ ☑ ☑ ☐ Daily folder review forms are complete and reviewed; QC outliers noted
- ☑ ☑ ☑ ☐ Analysis matrix listing all analytical runs is included, as applicable

Tracking Forms

- ☑ ☐ ☑ Work Orders and Chains of Custody forms included and reviewed.
- ☑ ☐ ☑ Preparation and analyses performed within holding times. Qualify and/or explain deviations in memo field
- ☐ ☑ ☑ ☐ Cooler temperatures recorded on COC are within specification. Qualify and/or explain deviations in memo field

Sample Preparation

- ☐ ☐ ☑ ☐ Bench sheets and extraction logs, where applicable
- ☐ ☐ ☐ ☑ Sample cleanup data and records (e.g. GPC logs)
- ☐ ☐ ☐ ☑ Homogenization and Moisture data

Initial Calibration Data

Group ICAL data by instrument and analysis date:

- ☑ ☐ ☐ ☐ All ICALs associated with samples are present, reviewed, and pass SOP criteria. (If failure, discrepancy form must be included)
- ☐ ☑ ☐ ☐ Check for misidentification (e.g. isomers such as dichlorobenzene)

Sample Data

Group data for the following areas in sections by method, instrument, and analysis date.

Continuing Calibrations

- ☑ ☐ ☐ ☐ All CCALs associated with samples are present and meet SOP criteria. If not, discrepancy form included.
- ☑ ☑ ☐ Average RRFs from associated ICAL are correctly transposed to CCAL summary form
- ☑ ☑ ☐ CCAL RRFs and %Ds calculated correctly. Check at least 1 surrogate & 1 target analyte
- ☑ ☑ ☐ Check %Ds and RRFs against SOP criteria

81496

ESAT Region 9 | **ICF International**
Case: R33911 | **Analysis:** Dissolved Gasses | **TDF:** 01001084 | **Matrix:** water
DCN: 14507 | **Site:** Dimock Residential Groundwater Site | **SDG:** 12039A

P T F N/A (indicates that the item is present and reviewed for accuracy and completeness)

Quantitation Limit Standards
- ☑ ☐ ☐ ☐ Percent recoveries of 60-140% met; outliers noted and flagged

Laboratory Control Samples
- ☑ ☐ ☐ Percent recoveries met. If not, discrepancy form included unless not required because: _____

Method Blanks
- ☑ ☐ ☐ Present and no target analyte results > ½ QL; if not, flag data as appropriate

MS/MSD or Duplicate Data not supplied
- ☒ ☐ ☐ ☐ Percent recoveries and RPDs were met; outliers are noted and flagged. Note significant deviations in LIMS memo field

Sample Data
- ☑ ☐ ☐ ☐ Bench sheet(s) and injection or run logs present for all samples
- ☐ ☐ ☐ ☑ Internal standards meet SOP criteria
- ☑ ☐ ☐ ☐ System Monitoring Compound/Surrogate recoveries met; outliers are noted and flagged
- ☐ ☐ ☐ All non-detects are reported as ND on the quantitation report and explained for QC samples
- ☑ ☐ ☐ Quantitation results are correctly calculated. Check at least one surrogate or one target analyte
- ☐ ☐ ☐ Mass spectral data are present for all target analytes
- ☐ ☐ ☐ ☐ Check for manual integrations (m) identified on quantitation reports. Verify presence of manual integration data, initialed and dated by a supervisor
- ☐ ☐ ☐ ☐ Compound concentrations exceeding the upper range of the instrument are reported from the dilution run
- ☐ ☐ Check for carry-over contamination
- ☑ ☐ ☐ ☐ Dilutions and reruns appropriate.
- ☐ ☐ ☐ TICs properly identified; TIC report and data present; proper TIC name used (Organics)
- ☐ ☐ ☐ ☐ QC outliers are appropriately flagged in LIMS

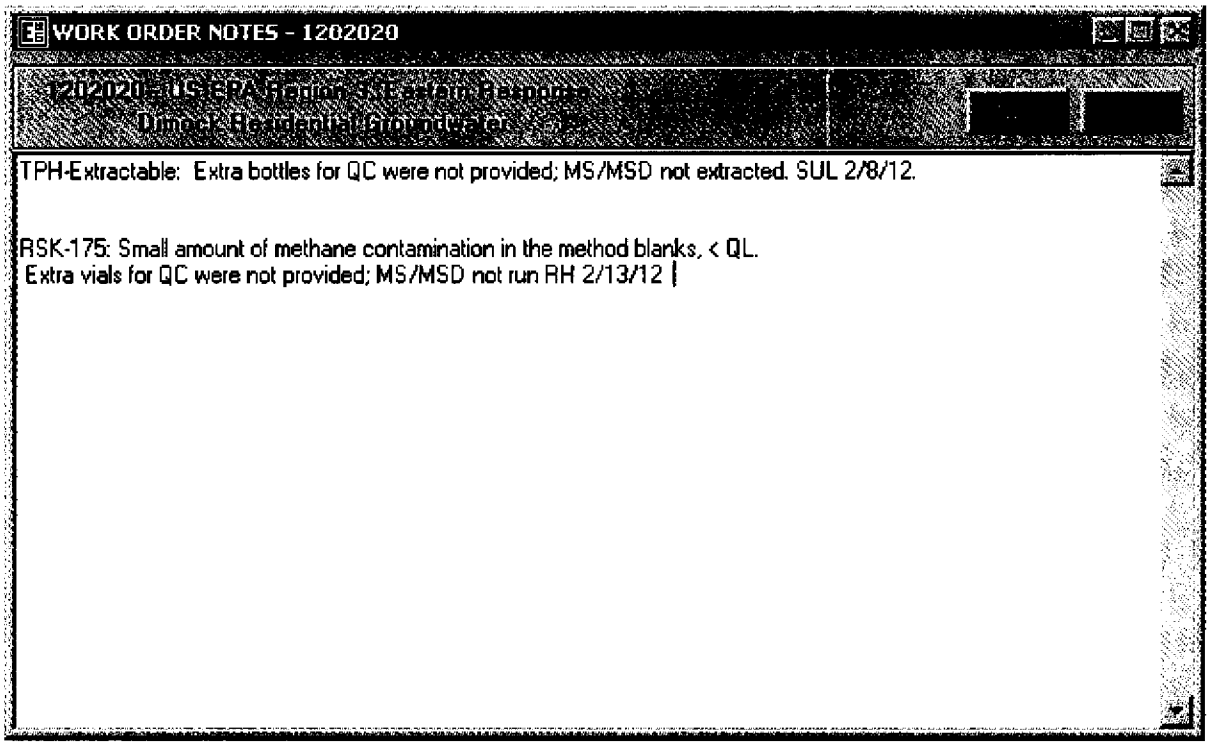
Miscellaneous Data
- ☐ ☐ ☐ ☐ Storage blank data present
- ☐ ☐ ☐ ☐ Other data, as applicable _____

Standards Records
- ☐ ☐ ☐ ☐ Standards records from LIMS (and logbook pages as needed)

Canister Certification Data (TO 15 only)
- ☐ ☐ ☐ ☐ Data and supporting QC present

For ESAT Files: ESAT Review form (original) and Cover Memo (copy)

01497



00003 B

WORK ORDER NOTES - 1202023

1202023 - US EPA Region 3, Eastern Response
Dimock Residential Groundwater

[redacted]

TPH-Extractable: Extra bottles for QC were not provided; MS/MSD not extracted. SUL 2/9/12.

RSK-175: Small amount of methane contamination in the method blanks, < QL.
Extra vials for QC were not provided; MS/MSD not run RH 2/13/12

RSK-175: Methane result for sample 1202023-10 was flagged B since the concentration of this analyte in the sample was less than five time the concentration found in the associated field blank.

Samples 1202023-08-10 were received at 8 degrees C, which is above the recommended temperature range of 2 - 6 degrees C; data flagged appropriately. TD 02/14/12

Organics Daily Folder Preparation/Technical Review Guide

Analysis Method	**RSK-175**	**Analyst Initial**	RH	**Reviewer Initial**		**Batch/ Sequence**	**2010040**
Instrument ID	**AG6890N-6**	**Date Analyzed**	1/26/12	**Date**	01/27/12	**Chemstation Last Update**	**1/27/12 11:26:56**
Cases	**ICAL**			**SDGs**	**ICAL**		

Review each item listed below. As problems are discovered list them in the non-conformance section of the form and provide and explanation in the discussion part of the table.

NA	A	PR	Item Description
	✓	✓	Runlog (Present, legible, peer reviewed)
✓			Tune/ Degradation Standard
	✓	✓	Initial Calibration (SOP criteria for number of levels, concentration, and %RSD). Manual calculation. Include summary for daily review.
✓			Continuing Calibration Verification (frequency, recovery, and %D). Manual calculation.
✓			QLS (level, frequency, and recovery) (include Chemstation summary)
✓			Method / Extraction / Storage Blanks (frequency and contamination levels)
✓			Surrogate Recoveries
✓			IS Areas (SOP criteria met)
✓			LCS (level, frequency, and recovery) (include Chemstation summary)
✓			MS/MSD
✓			Samples (within calibration range, results calculated correctly)
✓			Manual Integration Verified
	✓	✓	Standard Prep Log (all pages present, legible, peer reviewed, legible)
✓			Sample Prep/Extraction (all pages present, legible, peer reviewed)
✓			Others:

NA = not applicable A = Analyst check PR = Peer Review Check

Non-conformance Report

QC	File ID	Result	QC Limit	High Bias	Low Bias	Flag ND	Flag Hits	Discussion
								Propane and Butane are not calibrated. They are added simply as presumptive retention time markers for informational purposes only.

01508

Organics Daily Folder Preparation/Technical Review Guide

Analysis Method	Dissolved Gasses	Analyst Initial	RH	Reviewer Initial	SL	Batch/ Sequence	2020026/B2B0032
Instrument ID	AG6890N-6	Date Analyzed	2/9/12	Date	2/9/12	Chemstation Last Update	1/27/12 1:26:56
Cases	R33911			SDGs	12030A, 12033A, 12038C, 12039A		

RH 3 2/9/12

Review each item listed below. As problems are discovered list them in the non-conformance section of the form and provide and explanation in the discussion part of the table.

NA	A	PR	Item Description
	✓	✓	Runlog (Present, legible, peer reviewed)
✓			Tune/ Degradation Standard
	✓	✓	Initial Calibration (SOP criteria for number of levels, concentration, and %RSD). Manual calculation. Include summary for daily review.
	✓	✓	Continuing Calibration Verification (frequency, recovery, and %D). Manual calculation.
	✓	✓	QLS (level, frequency, and recovery) (include Chemstation summary)
	✓	✓	Method / Extraction / Storage Blanks (frequency and contamination levels)
	✓	✓	Surrogate Recoveries
✓			IS Areas (SOP criteria met)
	✓	✓	LCS (level, frequency, and recovery) (include Chemstation summary)
	✓	✓	MS/MSD
	✓	✓	Samples (within calibration range, results calculated correctly)
✓			Manual Integration Verified
✓			Standard Prep Log (all pages present, legible, peer reviewed, legible)
	✓	✓	Sample Prep/Extraction (all pages present, legible, peer reviewed)
✓			Others:

NA = not applicable A = Analyst check PR = Peer Review Check

Non-conformance Report

QC	File ID	Result	QC Limit	High Bias	Low Bias	Flag ND	Flag Hits	Discussion
BLK1	0208126R04	.921	≤ 0.615					Methane hit ≤ QL but ≥ ½ QL
								Check for carry-over:
								1202005-11PE1 & 1202020-12.
								SL, 2/9/12.

01581

Organics Daily Folder Preparation/Technical Review Guide

Analysis Method	**Dissolved Gasses**	**Analyst Initial**	RH	**Reviewer Initial**		**Batch/ Sequence**	2020032/B2B0041
Instrument ID	**AG6890N-6**	**Date Analyzed**	2/9/12	**Date**	2/10/12	**Chemstation Last Update**	1/27/12 1:26:56
Cases	**R33911**			**SDGs**	12037A, 12039A,		

Review each item listed below. As problems are discovered list them in the non-conformance section of the form and provide and explanation in the discussion part of the table.

NA	A	PR	Item Description
	/	/	Runlog (Present, legible, peer reviewed)
/			Tune/ Degradation Standard
	/	/	Initial Calibration (SOP criteria for number of levels, concentration, and %RSD). Manual calculation. Include summary for daily review.
	/	/	Continuing Calibration Verification (frequency, recovery, and %D). Manual calculation.
	/	/	QLS (level, frequency, and recovery) (include Chemstation summary)
	/	/	Method / Extraction / Storage Blanks (frequency and contamination levels)
	/	/	Surrogate Recoveries
/			IS Areas (SOP criteria met)
	/	/	LCS (level, frequency, and recovery) (include Chemstation summary)
/			MS/MSD
	/	/	Samples (within calibration range, results calculated correctly)
/			Manual Integration Verified
/			Standard Prep Log (all pages present, legible, peer reviewed, legible)
	/	/	Sample Prep/Extraction (all pages present, legible, peer reviewed)
/			Others:

NA = not applicable A = Analyst check PR = Peer Review Check

Non-conformance Report

QC	File ID	Result	QC Limit	High Bias	Low Bias	Flag ND	Flag Hits	Discussion
BLK1	0209126R04	.729	≤ 0.615					Methane hit ≤ QL but ≥ ½ QL

01582

Organics Daily Folder Preparation/Technical Review Guide

Analysis Method	Dissolved Gasses	Analyst Initial	RH	Reviewer Initial		Batch/ Sequence	2020042/B2B0053
Instrument ID	AG6890N-6	Date Analyzed	2/12/12	Date	2/13/12	Chemstation Last Update	1/27/12 1:26:56
Cases	R33911			SDGs	12039A, 12041B		

Review each item listed below. As problems are discovered list them in the non-conformance section of the form and provide and explanation in the discussion part of the table.

NA	A	PR	Item Description
	/	/	Runlog (Present, legible, peer reviewed)
/			Tune/ Degradation Standard
	/	/	Initial Calibration (SOP criteria for number of levels, concentration, and %RSD). Manual calculation. Include summary for daily review.
	/	/	Continuing Calibration Verification (frequency, recovery, and %D). Manual calculation.
	/	/	QLS (level, frequency, and recovery) (include Chemstation summary)
	/	/	Method / Extraction / Storage Blanks (frequency and contamination levels)
	/	/	Surrogate Recoveries
/			IS Areas (SOP criteria met)
	/	/	LCS (level, frequency, and recovery) (include Chemstation summary)
/			MS/MSD
	/	/	Samples (within calibration range, results calculated correctly)
/			Manual Integration Verified
/			Standard Prep Log (all pages present, legible, peer reviewed, legible)
	/	/	Sample Prep/Extraction (all pages present, legible, peer reviewed)
/			Others:

NA = not applicable A = Analyst check PR = Peer Review Check

Non-conformance Report

QC	File ID	Result	QC Limit	High Bias	Low Bias	Flag ND	Flag Hits	Discussion
BLK1	0212126R04	.725	≤ 0.615					Methane hit ≤ QL but ≥ ½ QL

USEPA Region 9 Laboratory
Organic Analysis Summary

Case: R33911
SDG: 12034C
Analysis: Dissolved Gasses
Analyst: RH
Reviewer:

Sample ID	Sample Runs		
Instrument:	AG6890N-6	AG6890N-6	AG6890N-6
Analysis Date:	2/8/2012	2/9/2012	2/12/2012
Sequence:	2020026	2020032	2020042
1202020-03	C1 OC		
1202020-03RE1 0.15ML		RPT C1	
1202020-04	RPT		
1202020-05	C1 OC		
1202020-05RE1 0.15ML		RPT C1	
1202020-06	RPT		
1202020-07	RPT		
1202020-08	RPT		
1202020-09	RPT		
1202020-10	RPT		
1202020-11	C1 OC		
1202020-11RE1 0.2ML		RPT C1	
1202020-12	RPT		
1202020-12RE1 16.1ML		NU RAN TO CHECK FOR CO	
1202020-13	RPT		
1202023-01		RPT	
1202023-02		C1 OC	
1202023-02RE1 0.5ML			RPT C1
1202023-03		C1 OC	
1202023-03RE1 0.5ML			RPT C1
1202023-04		RPT	
1202023-05		C1 OC	
1202023-05RE1 0.3ML			RPT C1
1202023-06		C1 OC	
1202023-06RE1 0.3ML			RPT C1
1202023-07		RPT	
1202023-08		RPT	
1202023-09		RPT	
1202023-10		RPT	
1202023-11		RPT	
B2B0032-BLK1	RPT		
B2B0032-BS1	RPT		
B2B0041-BLK1		RPT	
B2B0041-BLK1		RPT	
B2B0053-BLK1			RPT
B2B0053-BLK1			RPT

Definitions

RPT	Report
NU	Not Used
OC	Over calibration
OTT	Out of tune time
nX	Dilution, where n is dilution factor
CO	Carry over

SAMPLE TRACKING FORMS

91585

WORK ORDER

Printed: 2/8/2012 11:45:59AM

1202020

EPA Region 9 Laboratory

Client: US EPA Region 3, Eastern Response Branch **Project Number:** R33911
Project: Dimock Residential Groundwater

Report To:
US EPA Region 3, Eastern Response Branch
Richard Fetzer
100 Gypsum Road
Stroudsburg, PA 18360
Phone: (215) 341-6307
Fax: XX

Project Contact
US EPA Region 3, Eastern Response Branch
Richard Fetzer
100 Gypsum Road
Stroudsburg, PA 18360
Phone :(215) 341-6307
Fax: XX

Shipping Containers	Description	Temp C	Custody Seals?	Containers Intact?	Labels COC Agree?	Preservation Confirmed?	Received on Ice?	Comments
1Cooler	Cooler	4	Yes	Yes	Yes	No	Yes	793199237545
2Cooler	Cooler	3	Yes	Yes	Yes	No	Yes	798031383881
3Cooler	Cooler	3	Yes	Yes	Yes	No	Yes	793202422700
4Cooler	Cooler	3	Yes	Yes	Yes	No	Yes	798030340908

Date Due: 03/01/12 15:00 (21 day TAT) SDG: 12039A
Received By: Richard Bauer Date Received: 02/08/12 09:50
Logged In By: Jack Berges Date Logged In: 02/08/12 10:15

Analysis	Hold Time Expires	Comments
1202020-01 HW43 [Water] Sampled 02/06/12 12:06 Eastern		
TPH - Extractable	02/13/12	
1202020-02 HW43-P [Water] Sampled 02/06/12 12:19 Eastern		
TPH - Extractable	02/13/12	
1202020-03 HW31 [Water] Sampled 02/06/12 18:20 Eastern		
TPH - Extractable	02/13/12	
TPH - Purgeable	02/20/12	
Dissolved HC Gases	02/20/12	5 day prelim results
1202020-04 HW31-P [Water] Sampled 02/06/12 18:28 Eastern		
TPH - Extractable	02/13/12	
TPH - Purgeable	02/20/12	
Dissolved HC Gases	02/20/12	5 day prelim results
1202020-05 HW31z [Water] Sampled 02/06/12 18:20 Eastern		
TPH - Purgeable	02/20/12	
TPH - Extractable	02/13/12	
Dissolved HC Gases	02/20/12	5 day prelim results

WORK ORDER

Printed: 2/8/2012 11:45:59AM

1202020

EPA Region 9 Laboratory

Client: US EPA Region 3, Eastern Response Branch **Project Number:** R33911
Project: Dimock Residential Groundwater

Analysis	Hold Time Expires	Comments

Analysis	Expires	Comments
1202020-06 TB25 [Water] Sampled 02/06/12 10:25 Eastern		
TPH - Purgeable	02/20/12	
Dissolved HC Gases	02/20/12	5 day prelim results
1202020-07 FB11 [Water] Sampled 02/06/12 14:36 Eastern		
TPH - Extractable	02/13/12	
TPH - Purgeable	02/20/12	
Dissolved HC Gases	02/20/12	5 day prelim results
1202020-08 HW30 [Water] Sampled 02/06/12 14:34 Eastern		
TPH - Purgeable	02/20/12	
Dissolved HC Gases	02/20/12	5 day prelim results
TPH - Extractable	02/13/12	
1202020-09 HW30-P [Water] Sampled 02/06/12 15:00 Eastern		
TPH - Extractable	02/13/12	
TPH - Purgeable	02/20/12	
Dissolved HC Gases	02/20/12	5 day prelim results
1202020-10 TB26 [Water] Sampled 02/06/12 10:30 Eastern		
Dissolved HC Gases	02/20/12	5 day prelim results
TPH - Purgeable	02/20/12	
1202020-11 HW15a [Water] Sampled 02/07/12 10:47 Eastern		
Dissolved HC Gases	02/21/12	5 day prelim results
TPH - Extractable	02/14/12	
TPH - Purgeable	02/21/12	
1202020-12 HW15a-P [Water] Sampled 02/07/12 10:55 Eastern		
Dissolved HC Gases	02/21/12	5 day prelim results
TPH - Purgeable	02/21/12	
TPH - Extractable	02/14/12	
1202020-13 TB28 [Water] Sampled 02/07/12 07:05 Eastern		
Dissolved HC Gases	02/21/12	5 day prelim results
TPH - Purgeable	02/21/12	

Reviewed By

Date

00010B

DIM0279368

Page 1 of 1

cooler #1

USEPA CLP Generic COC (LAB COPY)

CHAIN OF CUSTODY RECORD

No: 3-020712-125817-0138

DateShipped: 2/7/2012

CarrierName: FedEx

AirbillNo: 7931 9923 7545 ✓

Case #: CT5865

Lab: EPA R9 Laboratory

Lab Contact:

Lab Phone: 510.412.2389

Sample #	Matrix/Sampler	Coll. Method	Analysis/Turnaround	Tag/Preservative/Bottles	Station Location	Collected	For Lab Use Only
HW43	Drinking Water/ David Johnson	Grab	DRO(7), DRO(7)	3741 (-NA- / 1000mlAmber), 3742 (-NA- / 1000mlAmber) (2)	HW43	02/06/2012 12:06	
HW43-P	Drinking Water/ Francisco Lapostol	Grab	DRO(7), DRO(7)	3777 (-NA- / 1000mlAmber), 3778 (-NA- / 1000mlAmber) (2)	HW43	02/06/2012 12:19	
			Custody seals intact and temp blank 4°C.				RM 2/8/12

01587

Special Instructions:

Shipment for Case Complete? N

Samples Transferred From Chain of Custody #

Analysis Key: DRO=11-Diesel Range Organics

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished By	Date	Received by	Date	Time
4	[signature]	2/7/12	—	Fed Ex	—	—	→		[signature]	2/8/12	0950

000010

DIM0279392

USEPA CLP Generic COC (LAB COPY)

CHAIN OF CUSTODY RECORD

No: 3-020712-132522-0139

DateShipped: 2/7/2012
CarrierName: FedEx
AirbillNo: 7980 3136 3881

Case #: CT5865

Lab: EPA R9 Laboratory
Lab Contact:
Lab Phone: 510.412.2389

Sample #	Matrix/Sampler	Coll. Method	Analysis/Turnaround	Tag/Preservative/Bottles	Station Location	Collected	For Lab Use Only
HW31	Drinking Water/ Dan Jacobsen	Grab	RSK-175(7), RSK-175(7), DRO(7), DRO(7), GRO(7), GRO(7)	3903 (HCl / 40mlGlassVial), 3904 (HCl / 40mlGlassVial), 3921 (-NA- / 1000mlAmber), 3922 (-NA- / 1000mlAmber), 3925 (HCl / 40mlGlassVial), 3926 (HCl / 40mlGlassVial) (6)	HW31	02/06/2012 18:20	
HW31-P	Drinking Water/ Francisco Lapostol	Grab	RSK-175(7), RSK-175(7), DRO(7), DRO(7), GRO(7), GRO(7)	3975 (HCl / 40mlGlassVial), 3976 (HCl / 40mlGlassVial), 3993 (-NA- / 1000mlAmber), 3994 (-NA- / 1000mlAmber), 3997 (HCl / 40mlGlassVial), 3998 (HCl / 40mlGlassVial) (6)	HW31	02/06/2012 18:28	
HW31z	Drinking Water/ Dan Jacobsen	Grab	RSK-175(7), RSK-175(7), DRO(7), DRO(7), GRO(7), GRO(7)	3939 (HCl / 40mlGlassVial), 3940 (HCl / 40mlGlassVial), 3957 (-NA- / 1000mlAmber), 3958 (-NA- / 1000mlAmber), 3961 (HCl / 40mlGlassVial), 3962 (HCl / 40mlGlassVial) (6)	HW31	02/06/2012 18:20	

01588

Custody seals intact & temp blank 3°C 2/8/12

Special Instructions:

Shipment for Case Complete? N

Samples Transferred From Chain of Custody #

Analysis Key: RSK-175=11-Dissolved Gases_Meth,Ethe,Etha, DRO=11-Diesel Range Organics, GRO=11-Gasoline Range Organics

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished By	Date	Received by	Date	Time
18		2/7/12				Tuesday EX				0950	2/8/12

COOLER #2

DIM02793694

DIM02793568

Page 2 of 2

USEPA CLP Generic COC (LAB COPY)
DateShipped: 2/7/2012
CarrierName: FedEx
AirbillNo: 7980 3138 3881

CHAIN OF CUSTODY RECORD

Case #: CT5865

No: 3-020712-132522-0139
Lab: EPA R9 Laboratory
Lab Contact:
Lab Phone: 510.412.2389

Sample #	Matrix/Sampler	Coll. Method	Analysis/Turnaround	Tag/Preservative/Bottles	Station Location	Collected	For Lab Use Only
TB25	Aqueous/ Christina Rice	Grab	RSK-175(7), RSK-175(7), GRO(7), GRO(7)	3510 (HCl / 40mlGlassVial), 3511 (HCl / 40mlGlassVial), 3512 (HCl / 40mlGlassVial), 3513 (HCl / 40mlGlassVial) (4)	TB25	02/06/2012 10:25	

Custody seals intact and temp blank 3°C upon receipt @ lab.
CM 2/7/12

01589

Special Instructions

Shipment for Case Complete? N
Samples Transferred From Chain of Custody #

Analysis Key: RSK-175=11-Dissolved Gases_Meth,Ethe,Etha, DRO=11-Diesel Range Organics, GRO=11-Gasoline Range Organics

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished By	Date	Received by	Date	Time
4		2/7/12				fed Ex			RM FPM CM Lab	2/8/12	0950

COOLER #2

00012

cooler #3

USEPA CLP Generic COC (LAB COPY)
DateShipped: 2/7/2012
CarrierName: FedEx
AirbillNo: 7932 0242 2700

CHAIN OF CUSTODY RECORD

Case #: CT5865

No: 3-020712-161354-0146
Lab: EPA R9 Laboratory
Lab Contact:
Lab Phone: 510.412.2389

Sample #	Matrix/Sampler	Coll. Method	Analysis/Turnaround	Tag/Preservative/Bottles	Station Location	Collected	For Lab Use Only
HW15a	Drinking Water/ Tom Sedlacek	Grab	RSK-175(7), RSK-175(7), DRO(7), DRO(7), GRO(7), GRO(7)	4025 (HCl / 40mlGlassVial), 4026 (HCl / 40mlGlassVial), 4043 (-NA- / 1000mlAmber), 4044 (-NA- / 1000mlAmber), 4047 (HCl / 40mlGlassVial), 4048 (HCl / 40mlGlassVial) (6)	HW15a	02/07/2012 10:47	
HW15a-P	Drinking Water/ Dan Jacobsen	Grab	RSK-175(7), RSK-175(7), DRO(7), DRO(7), GRO(7), GRO(7)	4061 (HCl / 40mlGlassVial), 4062 (HCl / 40mlGlassVial), 4079 (-NA- / 1000mlAmber), 4080 (-NA- / 1000mlAmber), 4083 (HCl / 40mlGlassVial), 4084 (HCl / 40mlGlassVial) (6)	HW15a	02/07/2012 10:55	
TB28	Aqueous/ Christina Rice	Grab	RSK-175(7), RSK-175(7), GRO(7), GRO(7)	4015 (HCl / 40mlGlassVial), 4016 (HCl / 40mlGlassVial), 4017 (HCl / 40mlGlassVial), 4018 (HCl / 40mlGlassVial) (4)	TB28	02/07/2012 07:05	

01516

Special Instructions: Custody Seals intact and temp. blank 3°C upon receipt 2/8/12

Shipment for Case Complete? N
Samples Transferred From Chain of Custody #

Analysis Key: RSK-175=11-Dissolved Gases_Meth,Ethe,Etha, DRO=11-Diesel Range Organics, GRO=11-Gasoline Range Organics

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished By	Date	Received by	Date	Time
16		2/7/12				Fed Ex				2/8/12	0950

USEPA CLP Generic COC (LAB COPY)

DateShipped: 2/7/2012
CarrierName: FedEx
AirbillNo: 7980 3034 0908

CHAIN OF CUSTODY RECORD

Case #: CT5865

No: 3-020712-123038-0134

Lab: EPA R9 Laboratory
Lab Contact:
Lab Phone: 510.412.2389

Sample #	Matrix/Sampler	Coll. Method	Analysis/Turnaround	Tag/Preservative/Bottles	Station Location	Collected	For Lab Use Only
FB11	Aqueous/ Dan Jacobsen	Grab	RSK-175(7), RSK-175(7), DRO(7), DRO(7), GRO(7), GRO(7)	3795 (HCl / 40mlGlassVial), 3796 (HCl / 40mlGlassVial), 3813 (-NA- / 1000mlAmber), 3814 (-NA- / 1000mlAmber), 3817 (HCl / 40mlGlassVial), 3818 (HCl / 40mlGlassVial) (6)	FB11	02/06/2012 14:36	
HW30	Drinking Water/ Tom Sedlacek	Grab	RSK-175(7), DRO(7), DRO(7), GRO(7), GRO(7)	3831 (HCl / 40mlGlassVial), 3849 (-NA- / 1000mlAmber), 3850 (-NA- / 1000mlAmber), 3853 (HCl / 40mlGlassVial), 3854 (HCl / 40mlGlassVial) (5)	HW30	02/06/2012 14:34	
HW30-P	Drinking Water/ Dan Jacobsen	Grab	RSK-175(7), RSK-175(7), DRO(7), DRO(7), GRO(7), GRO(7)	3867 (HCl / 40mlGlassVial), 3868 (HCl / 40mlGlassVial), 3885 (-NA- / 1000mlAmber), 3886 (-NA- / 1000mlAmber), 3889 (HCl / 40mlGlassVial), 3890 (HCl / 40mlGlassVial) (6)	HW30	02/06/2012 15:00	

81511

Special Instructions: custody seals intact and temp blank 3°C upon receipt at lab RVS 2/8/12

Shipment for Case Complete? N

Samples Transferred From Chain of Custody #

Analysis Key: RSK-175=11-Dissolved Gases_Meth,Ethe,Etha, DRO=11-Diesel Range Organics, GRO=11-Gasoline Range Organics

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished By	Date	Received by	Date	Time
17	Dan Bly	2/7/12				Fed Ex			RVS EPA R9 Lab	2/8/12	0950

COOLER # 4

000144

DIM0279368

USEPA CLP Generic COC (LAB COPY)

DateShipped: 2/7/2012

CarrierName: FedEx

AirbillNo: 7980 3034 0908 ✓

CHAIN OF CUSTODY RECORD

Case #: CT5865

No: 3-020712-123038-0134

Lab: EPA R9 Laboratory

Lab Contact:

Lab Phone: 510.412.2389

Sample #	Matrix/Sampler	Coll. Method	Analysis/Turnaround	Tag/Preservative/Bottles	Station Location	Collected	For Lab Use Only
TB26	Aqueous/ Christina Rice	Grab	RSK-175(7), RSK-175(7), GRO(7), GRO(7)	3517 (HCl / 40mlGlassVial), 3518 (HCl / 40mlGlassVial), 3519 (HCl / 40mlGlassVial), 3520 (HCl / 40mlGlassVial) (4)	TB26	02/06/2012 10:30	

Custody seals intact and temp. blank 3°C upon receipt at lab.

RPS 2/8/12

01512

Special Instructions:	**Shipment for Case Complete? N**
	Samples Transferred From Chain of Custody #

Analysis Key: RSK-175=11-Dissolved Gases_Meth,Ethe,Etha. DRO=11-Diesel Range Organics. GRO=11-Gasoline Range Organics

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished By	Date	Received by	Date	Time
4	[signature]	2/7/12	—			Fed Ex	—		[signature] EPA R9 Lab	2/8/12	0950

COOLER #4

00014B

DIM0279397

01513

WORK ORDER

Printed: 2/9/2012 12:47:46PM

1202023

EPA Region 9 Laboratory

Client: US EPA Region 3, Eastern Response Branch **Project Number:** R33911
Project: Dimock Residential Groundwater

Report To:
US EPA Region 3, Eastern Response Branch
Richard Fetzer
100 Gypsum Road
Stroudsburg, PA 18360
Phone: (215) 341-6307
Fax: XX

Project Contact
US EPA Region 3, Eastern Response Branch
Richard Fetzer
100 Gypsum Road
Stroudsburg, PA 18360
Phone :(215) 341-6307
Fax: XX

Shipping Containers	Description	Temp C	Custody Seals?	Containers Intact?	Labels COC Agree?	Preservation Confirmed?	Received on Ice?	Comments
1Cooler	Cooler	3	Yes	Yes	Yes	No	Yes	798035457893
2Cooler	Cooler	2	Yes	Yes	Yes	No	Yes	793208287055
3Cooler	Cooler	8	Yes	Yes	Yes	No	Yes	798037594161

Date Due: 03/02/12 15:00 (21 day TAT) SDG: 12039A
Received By: Richard Bauer Date Received: 02/09/12 10:00
Logged In By: Chris Cagurangan Date Logged In: 02/09/12 10:11

Analysis	Hold Time Expires	Comments
1202023-01 FB12 [Water] Sampled 02/07/12 13:35 Eastern		
TPH - Extractable	02/14/12	
Dissolved HC Gases	02/21/12	5 day prelim results
TPH - Purgeable	02/21/12	
1202023-02 HW51 [Water] Sampled 02/07/12 13:48 Eastern		
TPH - Purgeable	02/21/12	
TPH - Extractable	02/14/12	
Dissolved HC Gases	02/21/12	5 day prelim results
1202023-03 HW51-P [Water] Sampled 02/07/12 13:56 Eastern		
TPH - Extractable	02/14/12	
TPH - Purgeable	02/21/12	
Dissolved HC Gases	02/21/12	5 day prelim results
1202023-04 TB27 [Water] Sampled 02/07/12 07:00 Eastern		
TPH - Purgeable	02/21/12	
Dissolved HC Gases	02/21/12	5 day prelim results
1202023-05 HW47 [Water] Sampled 02/08/12 11:50 Eastern		
TPH - Purgeable	02/22/12	
TPH - Extractable	02/15/12	
Dissolved HC Gases	02/22/12	5 day prelim results

WORK ORDER

Printed: 2/9/2012 12:47:46PM

1202023

EPA Region 9 Laboratory

Client: US EPA Region 3, Eastern Response Branch **Project Number:** R33911
Project: Dimock Residential Groundwater

Analysis	Hold Time Expires	Comments

Analysis	Expires	Comments
1202023-06 HW47-P [Water] Sampled 02/08/12 12:25 Eastern		
Dissolved HC Gases	02/22/12	5 day prelim results
TPH - Purgeable	02/22/12	
TPH - Extractable	02/15/12	
1202023-07 TB29 [Water] Sampled 02/08/12 07:05 Eastern		
Dissolved HC Gases	02/22/12	5 day prelim results
TPH - Purgeable	02/22/12	
1202023-08 FB13 [Water] Sampled 02/08/12 09:00 Eastern		
TPH - Purgeable	02/22/12	
Dissolved HC Gases	02/22/12	5 day prelim results
TPH - Extractable	02/15/12	
1202023-09 HW38 [Water] Sampled 02/08/12 10:41 Eastern		
Dissolved HC Gases	02/22/12	5 day prelim results
TPH - Purgeable	02/22/12	
TPH - Extractable	02/15/12	
1202023-10 HW38-P [Water] Sampled 02/08/12 10:52 Eastern		
TPH - Extractable	02/15/12	
Dissolved HC Gases	02/22/12	5 day prelim results
TPH - Purgeable	02/22/12	
1202023-11 TB30 [Water] Sampled 02/08/12 07:10 Eastern		
TPH - Purgeable	02/22/12	
Dissolved HC Gases	02/22/12	5 day prelim results

Reviewed By

Date

00015A

DIM0279368

Cooler # 1

USEPA CLP Generic COC (LAB COPY)

DateShipped: 2/8/2012
CarrierName: FedEx
AirbillNo: 7980 3545 7893

CHAIN OF CUSTODY RECORD

Case #: CT5865

No: 3-020812-110736-0153

Lab: EPA R9 Laboratory
Lab Contact
Lab Phone: 510.412.2389

Sample #	Matrix/Sampler	Coll. Method	Analysis/Turnaround	Tag/Preservative/Bottles	Station Location	Collected	For Lab Use Only
FB12	Aqueous/ Dan Jacobsen	Grab	RSK-175(7), RSK-175(7), DRO(7), DRO(7), GRO(7), GRO(7)	4169 (HCl / 40mlGlassVial), 4170 (HCl / 40mlGlassVial), 4187 (-NA- / 1000mlAmber), 4188 (-NA- / 1000mlAmber), 4191 (HCl / 40mlGlassVial), 4192 (HCl / 40mlGlassVial) (6)	FB12	02/07/2012 13:35	
HW51	Drinking Water/ David Johnson	Grab	RSK-175(7), RSK-175(7), DRO(7), DRO(7), GRO(7), GRO(7)	4097 (HCl / 40mlGlassVial), 4098 (HCl / 40mlGlassVial), 4115 (-NA- / 1000mlAmber), 4116 (-NA- / 1000mlAmber), 4119 (HCl / 40mlGlassVial), 4120 (HCl / 40mlGlassVial) (6)	HW51	02/07/2012 13:48	
HW51-P	Drinking Water/ Francisco Lapostol	Grab	RSK-175(7), RSK-175(7), DRO(7), GRO(7), GRO(7)	4133 (HCl / 40mlGlassVial), 4134 (HCl / 40mlGlassVial), 4152 (-NA- / 1000mlAmber), 4155 (HCl / 40mlGlassVial), 4156 (HCl / 40mlGlassVial) (5)	HW51	02/07/2012 13:56	

81515

Custody seals intact and temp blank 3°C upon receipt @ lab [illegible] 2/9/12

Special Instructions:

Shipment for Case Complete? N

Samples Transferred From Chain of Custody #

Analysis Key: RSK-175=11-Dissolved Gases_Meth.Ethe.Etha, DRO=11-Diesel Range Organics, GRO=11-Gasoline Range Organics

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished By	Date	Received by	Date	Time
~~16~~ 17	Dan Jacobsen	2/8/12				Fed Ex			[signature] EPA R9 Lab	2/9/12	1000
DB 2/8/12											

000158

DIM0279400

DIM0279368

Page 2 of 2

cooler #1

USEPA CLP Generic COC (LAB COPY)

DateShipped: 2/8/2012
CarrierName: FedEx
AirbillNo: 7980 3545 7893

CHAIN OF CUSTODY RECORD

Case #: CT5865

No: 3-020812-110736-0153

Lab: EPA R9 Laboratory
Lab Contact:
Lab Phone: 510.412.2389

Sample #	Matrix/Sampler	Coll. Method	Analysis/Turnaround	Tag/Preservative/Bottles	Station Location	Collected	For Lab Use Only
TB27	Aqueous/ Christina Rice	Grab	RSK-175(7), RSK-175(7), GRO(7), GRO(7)	4008 (HCl / 40mlGlassVial), 4009 (HCl / 40mlGlassVial), 4010 (HCl / 40mlGlassVial), 4011 (HCl / 40mlGlassVial) (4)	TB27	02/07/2012 07:00	

Special Instructions: custody seals intact and temp blank 3°C upon receipt @ lab for 2/9/12

Shipment for Case Complete? N

Samples Transferred From Chain of Custody #

Analysis Key: RSK-175=11-Dissolved Gases_Meth,Ethe,Etha, DRO=11-Diesel Range Organics, GRO=11-Gasoline Range Organics

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished By	Date	Received by	Date	Time
4	[signature]	2/8/12				Fed Ex			[signature] EPA Region 9 Lab	2/9/12	1000

01516

00019

DIM0279401

01517

From: (304) 230-1230 Origin ID: BGMA
Brian BurrisSample Management, Dim
TechLaw, Inc.
63 PENNFIELD RD

MONTROSE, PA 18801

FedEx Express

Ship Date: 08FEB12
ActWgt: 52.0 LB
CAD: 8747913/INET3250

Dims: 18 X 14 X 12 IN

Delivery Address Bar Code

SHIP TO: (510) 412-2389 BILL SENDER

Sample Receiving
U.S. EPA Region 9 Laboratory
1337 S 46TH ST BLDG 201

RICHMOND, CA 94804

Ref # TL01-11-12-001
Invoice #
PO #
Dept #

THU - 09 FEB A2
PRIORITY OVERNIGHT
ASR
94804
CA-US
OAK

TRK# 7980 3545 7893
0201

XH JEMA

1. Select the 'Print' button to print 1 copy of each label.
2. The Return Shipment instructions, which provide your recipient with information on the returns process, will be printed with the label(s).
3. After printing, select your next step by clicking one of the displayed buttons.

Note: To review or print individual labels, select the Label button under each label image above.

Cooler #1

3°C

Page 1 of 1

Cooler #12

USEPA CLP Generic COC (LAB COPY)
DateShipped: 2/8/2012
CarrierName: FedEx
AirbillNo: 7932 0828 7055

CHAIN OF CUSTODY RECORD

Case # CT5865

No: 3-020812-171732-0160
Lab: EPA R9 Laboratory
Lab Contact:
Lab Phone: 510.412.2389

Sample #	Matrix/Sampler	Coll. Method	Analysis/Turnaround	Tag/Preservative/Bottles	Station Location	Collected	For Lab Use Only
HW47	Drinking Water/ David Johnson	Grab	RSK-175(7), RSK-175(7), DRO(7), DRO(7), GRO(7), GRO(7)	4336 (HCl / 40mlGlassVial), 4337 (HCl / 40mlGlassVial), 4354 (-NA- / 1000mlAmber), 4355 (-NA- / 1000mlAmber), 4358 (HCl / 40mlGlassVial), 4359 (HCl / 40mlGlassVial) (6)	HW47	02/08/2012 11:50	
HW47-P	Drinking Water/ Francisco Lapostol	Grab	RSK-175(7), RSK-175(7), DRO(7), DRO(7), GRO(7), GRO(7)	4370 (HCl / 40mlGlassVial), 4371 (HCl / 40mlGlassVial), 4388 (-NA- / 1000mlAmber), 4389 (-NA- / 1000mlAmber), 4392 (HCl / 40mlGlassVial), 4393 (HCl / 40mlGlassVial) (6)	HW47-P	02/08/2012 12:25	
TB29	Aqueous/ Christina Rice	Grab	RSK-175(7), RSK-175(7), GRO(7), GRO(7)	4202 (HCl / 40mlGlassVial), 4203 (HCl / 40mlGlassVial), 4204 (HCl / 40mlGlassVial), 4205 (HCl / 40mlGlassVial) (4)	TB29	02/08/2012 07:05	

Custody Seals intact and temp blank 7°C upon receipt @ lab [signature] 2/9/12

Special Instructions:

Shipment for Case Complete? N

Samples Transferred From Chain of Custody #

Analysis Key: RSK-175=11-Dissolved Gases_Meth,Ethe,Etha; DRO=11-Diesel Range Organics; GRO=11-Gasoline Range Organics

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished By	Date	Received by	Date	Time
16	[signature]	2/8/12				Fed Ex			[signature] USEPA CA 004	2/9/12	1000

01518

01518

DIM0279368

DIM0279403

From: (304) 230-1230 Origin ID: BGMA
Brian BurrisSample Management_Dim
TechLaw, Inc.
63 PENNFIELD RD

MONTROSE, PA 18801

Ship Date: 08FEB12
ActWgt: 45.0 LB Dims: 18 X 14 X 12 IN
CAD: 8747913/INET3250

Delivery Address Bar Code

Ref # TL01-11-12-001
Invoice #
PO #
Dept #

SHIP TO: (510) 412-2389 BILL SENDER

Sample Receiving
U.S. EPA Region 9 Laboratory
1337 S 46TH ST BLDG 201

RICHMOND, CA 94804

THU - 09 FEB A2
PRIORITY OVERNIGHT
ASR
94804
CA-US
OAK

TRK# 0201 7932 0828 7055

XH JEMA

1. Select the 'Print' button to print 1 copy of each label.
2. The Return Shipment instructions, which provide your recipient with information on the returns process, will be printed with the label(s).
3. After printing, select your next step by clicking one of the displayed buttons.

Note: To review or print individual labels, select the Label button under each Label Image above.

Cooler # 2

0019-A

DIM0279368

DIM0279404

DIM0279368

Cooler #3

USEPA CLP Generic COC (LAB COPY)

DateShipped: 2/8/2012
CarrierName: FedEx
AirbillNo: 7980 3759 4161 ✓

CHAIN OF CUSTODY RECORD

Case #: CT5865

No: 3-020812-161703-0156
Lab: EPA R9 Laboratory
Lab Contact:
Lab Phone: 510.412.2389

Sample #	Matrix/Sampler	Coll. Method	Analysis/Turnaround	Tag/Preservative/Bottles	Station Location	Collected	For Lab Use Only
FB13	Aqueous/ Dan Jacobsen	Grab	RSK-175(7), RSK-175(7), DRO(7), DRO(7), GRO(7), GRO(7)	4233 (HCl / 40mlGlassVial), 4234 (HCl / 40mlGlassVial), 4251 (-NA- / 1000mlAmber), 4252 (-NA- / 1000mlAmber), 4255 (HCl / 40mlGlassVial), 4256 (HCl / 40mlGlassVial) (6)	FB13	02/08/2012 09:00	
HW38	Drinking Water/ Tom Sedlacek	Grab	RSK-175(7), RSK-175(7), DRO(7), DRO(7), GRO(7), GRO(7)	4267 (HCl / 40mlGlassVial), 4268 (HCl / 40mlGlassVial), 4285 (-NA- / 1000mlAmber), 4286 (-NA- / 1000mlAmber), 4289 (HCl / 40mlGlassVial), 4290 (HCl / 40mlGlassVial) (6)	HW38	02/08/2012 10:41	
HW38-P	Drinking Water/ Dan Jacobsen	Grab	RSK-175(7), RSK-175(7), DRO(7), DRO(7), GRO(7), GRO(7)	4301 (HCl / 40mlGlassVial), 4302 (HCl / 40mlGlassVial), 4319 (-NA- / 1000mlAmber), 4320 (-NA- / 1000mlAmber), 4323 (HCl / 40mlGlassVial), 4324 (HCl / 40mlGlassVial) (6)	HW38-P	02/08/2012 10:52	

01526

Custody seals intact and temp blank 8°C upon receipt @ lab. 2/9/12

Special Instructions:

Shipment for Case Complete? N

Samples Transferred From Chain of Custody #

Analysis Key: RSK-175=11-Dissolved Gases_Meth,Ethe,Etha, DRO=11-Diesel Range Organics, GRO=11-Gasoline Range Organics

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished By	Date	Received by	Date	Time
18	Dan Bly	2/8/12	—	Fed Ex					EPA R9 Lab	2/9/12	1000

DIM0279405

Cooler #5

USEPA CLP Generic COC (LAB COPY)

DateShipped: 2/8/2012
CarrierName: FedEx
AirbillNo: 7980 3759 4161

CHAIN OF CUSTODY RECORD

Case #: CT5865

No: 3-020812-161703-0156

Lab: EPA R9 Laboratory
Lab Contact:
Lab Phone: 510.412.2389

Sample #	Matrix/Sampler	Coll. Method	Analysis/Turnaround	Tag/Preservative/Bottles	Station Location	Collected	For Lab Use Only
TB30	Aqueous/ Christina Rice	Grab	RSK-175(7), RSK-175(7), GRO(7), GRO(7)	4209 (HCl / 40mlGlassVial), 4210 (HCl / 40mlGlassVial), 4211 (HCl / 40mlGlassVial), 4212 (HCl / 40mlGlassVial) (4)	TB30	02/08/2012 07:10	
			custody seals intact and temp blank 8°C upon receipt @ lab. 2/9/12				

81521

Special Instructions:

Shipment for Case Complete? N

Samples Transferred From Chain of Custody #

Analysis Key: RSK-175=11-Dissolved Gases_Meth,Ethe,Etha, DRO=11-Diesel Range Organics, GRO=11-Gasoline Range Organics

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished By	Date	Received by	Date	Time
4		2/9/12		Fed Ex					EPA R9 Lab	2/9/12	1000

00020A

01522

From: (304) 230-1230 Origin ID: BGMA
Brian BurrisSample Management_Dim
TechLaw, Inc.
63 PENNFIELD RD

MONTROSE, PA 18801

FedEx Express

Ship Date: 08FEB12
ActWgt: 25.0 LB
CAD: 8747913/INET3250

Dims: 18 X 14 X 12 IN

Delivery Address Bar Code

Ref # TL01-11-12-001
Invoice #
PO #
Dept #

SHIP TO: (510) 412-2389 BILL SENDER

Sample Receiving
U.S. EPA Region 9 Laboratory
1337 S 46TH ST BLDG 201

RICHMOND, CA 94804

TRK# 0201 7980 3759 4161

THU - 09 FEB A2
PRIORITY OVERNIGHT
ASR
94804
CA-US
OAK

XH JEMA

1. Select the 'Print' button to print 1 copy of each label.
2. The Return Shipment instructions, which provide your recipient with information on the returns process, will be printed with the label(s).
3. After printing, select your next step by clicking one of the displayed buttons.

Note: To review or print individual labels, select the Label button under each label image above.

cooler #3

8°C

00020 B1

DIM0279368

DIM0279407

Sample Preparation

PREPARATION BENCH SHEET

B2B0032

EPA Region 9 Laboratory

'rinted: 2/14/2012 3:58:18PM

Project: R33911 - Dimock Residential Groundwater

Matrix: Water **Analysis:Dissolved HC Gases** **Prepared using: Volatiles - RSK175** **Surrogate used: 1L13003**

Lab Number	SampleName	Prepared	Initial (mL)	Final (mL)	Spike ID	Source ID	ul Spike	ul Surrogate	Prepared By	Extraction Comments
1201034-10 C	HW01	02/08/12 10:00	16.1	16.1				100	JV	5 day prelim results
1202005-11 G	HW35	02/08/12 10:00	16.1	16.1				100	RFH	5 day prelim results
1202017-01 E	EB02	02/08/12 10:00	16.1	16.1				100	RFH	5 day prelim results
1202017-02 M	HW45	02/08/12 10:00	16.1	16.1				100	RFH	5 day prelim results
1202017-03 E	HW45-P	02/08/12 10:00	16.1	16.1				100	RFH	5 day prelim results
1202017-04 C	TB24	02/08/12 10:00	16.1	16.1				100	RFH	5 day prelim results
1202017-05 B	HW43	02/08/12 10:00	16.1	16.1				100	RFH	5 day prelim results
1202017-06 C	HW43-P	02/08/12 10:00	16.1	16.1				100	RFH	5 day prelim results
1202017-07 C	TB23	02/08/12 10:00	16.1	16.1				100	RFH	5 day prelim results
1202020-03 E	HW31	02/08/12 10:00	16.1	16.1				100	RFH	5 day prelim results
1202020-04 E	HW31-P	02/08/12 10:00	16.1	16.1				100	RFH	5 day prelim results
1202020-05 E	HW31z	02/08/12 10:00	16.1	16.1				100	RFH	5 day prelim results
1202020-06 C	TB25	02/08/12 10:00	16.1	16.1				100	RFH	5 day prelim results
1202020-07 E	FB11	02/08/12 10:00	16.1	16.1				100	RFH	5 day prelim results
1202020-08 E	HW30	02/08/12 10:00	16.1	16.1				100	RFH	5 day prelim results
1202020-09 E	HW30-P	02/08/12 10:00	16.1	16.1				100	RFH	5 day prelim results
1202020-10 C	TB26	02/08/12 10:00	16.1	16.1				100	RFH	5 day prelim results
1202020-11 E	HW15a	02/08/12 10:00	16.1	16.1				100	RFH	5 day prelim results
1202020-12 E	HW15a-P	02/08/12 10:00	16.1	16.1				100	RFH	5 day prelim results
1202020-13 D	TB28	02/08/12 10:00	16.1	16.1				100	RFH	5 day prelim results
B2B0032-BLK1	Blank	02/08/12 10:00	16.1	16.1				100	RFH	
B2B0032-BS1	LCS	02/08/12 10:00	16.1	16.1	0L07008		100		RFH	
B2B0032-MS1	Matrix Spike	02/08/12 10:00	16.1	16.1	0L07008	1202017-02	100		RFH	

81524

2-14-12

Preparation Reviewed By Date

corrected prep time

D22 E

DIM0279368

DIM0279409

PREPARATION BENCH SHEET

B2B0032

EPA Region 9 Laboratory

'rinted: 2/14/2012 3:58:18PM

Project: -

Matrix: Water **Analysis:QC** **Prepared using: Volatiles - RSK175** **Surrogate used: 1L13003**

Lab Number	SampleName	Prepared	Initial (mL)	Final (mL)	Spike ID	Source ID	ul Spike	ul Surrogate	Prepared By	Extraction Comments
B2B0032-MSD1	Matrix Spike Dup	02/08/12 10:00	16.1	16.1	0L07008	1202017-02	100		RFH	

Reagents

Reagent #	Description

81525

p. 23 of

Preparation Reviewed By 2-14-12 Date

DIM0279368

DIM0279410

PREPARATION BENCH SHEET

B2B0041

EPA Region 9 Laboratory

'rinted: 2/14/2012 3:17:36PM

Project: R33911 - Dimock Residential Groundwater

Matrix: Water **Analysis:Dissolved HC Gases** **Prepared using: Volatiles - RSK175** **Surrogate used: 1L13003**

Lab Number	SampleName	Prepared	Initial (mL)	Final (mL)	Spike ID	Source ID	ul Spike	ul Surrogate	Prepared By	pH	Weight 1	Weight 2	Extraction Comments
1202013-09RE1 F	HW39-P	02/09/12 11:07	16.1	16.1				100	RFH	2			5 day prelim results
1202020-03RE1 E	HW31	02/09/12 11:07	0.15	16.1				100	RFH	2			5 day prelim results
1202020-05RE1 E	HW31z	02/09/12 11:07	0.15	16.1				100	RFH	2			5 day prelim results
1202020-11RE1 E	HW15a	02/09/12 11:07	0.2	16.1				100	RFH	2			5 day prelim results
1202020-12RE1 F	HW15a-P	02/09/12 11:07	16.1	16.1				100	RFH	2			5 day prelim results
1202023-01 E	FB12	02/09/12 11:07	16.1	16.1				100	RFH	2			5 day prelim results
1202023-02 E	HW51	02/09/12 11:07	16.1	16.1				100	RFH	2			5 day prelim results
1202023-03 D	HW51-P	02/09/12 11:07	16.1	16.1				100	RFH	2			5 day prelim results
1202023-04 C	TB27	02/09/12 11:07	16.1	16.1				100	RFH	2			5 day prelim results
1202023-05 E	HW47	02/09/12 11:07	16.1	16.1				100	RFH	2			5 day prelim results
1202023-06 E	HW47-P	02/09/12 11:07	16.1	16.1				100	RFH	2			5 day prelim results
1202023-07 C	TB29	02/09/12 11:07	16.1	16.1				100	RFH	2			5 day prelim results
1202023-08 E	FB13	02/09/12 11:07	16.1	16.1				100	RFH	2			5 day prelim results
1202023-09 E	HW38	02/09/12 11:07	16.1	16.1				100	RFH	2			5 day prelim results

01526

Preparation Reviewed By

2/14/12
Date

PREPARATION BENCH SHEET

B2B0041

EPA Region 9 Laboratory

'rinted: 2/14/2012 3:17:36PM

Project: R33911 - Dimock Residential Groundwater

Matrix: Water **Analysis:Dissolved HC Gases** **Prepared using: Volatiles - RSK175** **Surrogate used: 1L13003**

Lab Number	SampleName	Prepared	Initial (mL)	Final (mL)	Spike ID	Source ID	ul Spike	ul Surrogate	Prepared By	pH	Weight 1	Weight 2	Extraction Comments
1202023-10 E	HW38-P	02/09/12 11:07	16.1	16.1				100	RFH	2			5 day prelim results
1202023-11 D	TB30	02/09/12 11:07	16.1	16.1				100	RFH	2			5 day prelim results
B2B0041-BLK1	Blank	02/09/12 11:07	16.1	16.1				100	RFH				
B2B0041-BS1	LCS	02/09/12 11:07	16.1	16.1	0L07008		100	100	RFH				

81527

Reagents

Reagent #	Description

0025

Preparation Reviewed By — Date: 2/14/12

PREPARATION BENCH SHEET

B2B0053

EPA Region 9 Laboratory

'rinted: 2/14/2012 3:20:38PM

Project: R33911 - Dimock Residential Groundwater

Matrix: Water **Analysis:Dissolved HC Gases** **Prepared using: Volatiles - RSK175** **Surrogate used: 1L13003**

Lab Number	SampleName	Prepared	Initial (mL)	Final (mL)	Spike ID	Source ID	ul Spike	ul Surrogate	Prepared By	pH	Weight 1	Weight 2	Extraction Comments
1202023-02RE1 E	HW51	02/12/12 10:56	0.5	16.1				100	RFH	2			5 day prelim results
1202023-03RE1 D	HW51-P	02/12/12 10:56	0.5	16.1				100	RFH	2			5 day prelim results
1202023-05RE1 E	HW47	02/12/12 10:56	0.3	16.1				100	RFH	2			5 day prelim results
1202023-06RE1 E	HW47-P	02/12/12 10:56	0.3	16.1				100	RFH	2			5 day prelim results
1202031-01 E	HW48	02/12/12 10:56	16.1	16.1				100	RFH	2			5 day prelim results
1202031-02 E	HW48z	02/12/12 10:56	16.1	16.1				100	RFH	2			5 day prelim results
1202031-03 D	TB31	02/12/12 10:56	16.1	16.1				100	RFH	2			5 day prelim results
1202031-04 E	HW23	02/12/12 10:56	16.1	16.1				100	RFH	2			5 day prelim results
1202031-05 E	HW23-P	02/12/12 10:56	16.1	16.1				100	RFH	2			5 day prelim results
1202031-06 D	TB32	02/12/12 10:56	16.1	16.1				100	RFH	2			5 day prelim results
1202031-07 F	HW21	02/12/12 10:56	16.1	16.1				100	RFH	2			5 day prelim results
1202031-08 E	HW21z	02/12/12 10:56	16.1	16.1				100	RFH	2			5 day prelim results
1202031-09 D	TB33	02/12/12 10:56	16.1	16.1				100	RFH	2			5 day prelim results
1202031-10 E	HW22	02/12/12 10:56	16.1	16.1				100	RFH	2			5 day prelim results

01528

RFH 2/14/12
00026
00026

Preparation Reviewed By — Date: 2-14-12

PREPARATION BENCH SHEET

B2B0053

EPA Region 9 Laboratory

'rinted: 2/14/2012 3:20:38PM

Project: R33911 - Dimock Residential Groundwater

Matrix: Water **Analysis:Dissolved HC Gases** **Prepared using: Volatiles - RSK175** **Surrogate used: 1L13003**

Lab Number	SampleName	Prepared	Initial (mL)	Final (mL)	Spike ID	Source ID	ul Spike	ul Surrogate	Prepared By	pH	Weight 1	Weight 2	Extraction Comments
1202031-11 E	HW22-P	02/12/12 10:56	16.1	16.1				100	RFH	2			5 day prelim results
1202031-12 D	TB34	02/12/12 10:56	16.1	16.1				100	RFH	2			5 day prelim results
B2B0053-BLK1	Blank	02/12/12 10:56	16.1	16.1				100	RFH				
B2B0053-BS1	LCS	02/12/12 10:56	16.1	16.1	0L07008		100		RFH				

81529

Reagents

Reagent # **Description**

0000774

Preparation Reviewed By

2-14-12
Date

INITIAL CALIBRATION

81531

Injection Log

Directory: D:\MSDCHEM\1\2012\DATA\012612RSK

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	0126126r001.d	1.	2010040-ibl1		Unrecognized:Un
2	2	0126126r002.d	1.	2010040-CAL7		Unrecognized:Un
3	3	0126126r003.d	1.	2010040-CAL6		Unrecognized:Un
4	4	0126126r004.d	1.	2010040-CAL5		Unrecognized:Un
5	5	0126126r005.d	1.	2010040-CAL4		Unrecognized:Un
6	6	0126126r006.d	1.	2010040-CAL3		Unrecognized:Un
7	7	0126126r007.d	1.	2010040-CAL2		Unrecognized:Un
8	8	0126126r008.d	1.	2010040-CAL1		Unrecognized:Un
9	9	0126126r009.d	1.	2010040-SCV1		Unrecognized:Un
10	10	0126126r010.d	1.	DIAG MIXED GAS		26 Jan 2012 22:08
11	11	0126126r011.d	1.	PROPANE		26 Jan 2012 22:35
12	12	0126126r012.d	1.	BUTANE		26 Jan 2012 23:11

Compound List Report AG6890N-6

Method Path : D:\MSDCHEM\1\2012\METHOD\
Method File : 0126126RSK.M
Title :
Last Update : Fri Jan 27 09:53:18 2012
Response Via : Initial Calibration

Total Cpnds : 4

PK#		Compound Name	Exp_RT	Rel_RT	Cal	A/H	ID
1	T	Methane	1.53	1.000	A	A	R
2	S	Acetylene	7.98	1.000	A	A	R
3	T	Ethene	8.37	1.000	A	A	R
4	T	Ethane	9.00	1.000	A	A	R

Cal A = Average L = Linear LO = Linear w/origin Q = Quad QO = Quad w/origin
A/H = Area or Height
ID R = R.T. B = R.T. & Q Q = Qvalue L = Largest A = All

0126126RSK.M Fri Jan 27 10:35:07 2012

RESPONSE FACTOR REPORT AG6890N-6

Method Path: C:\MSDCHEM\1\METHODS
Method File: 020396RWA.M
Title:
Last Update: Fri Jan 27 09:53:18 2012
Response Via: Initial Calibration

Calibration Files:
1 = 0126126R008. 2 = 0126126R007. 3 = 0126126R006 4 = 0126126R005.D
5 = 0126126R004. 6 = 0126126R003. 7 = 0126126R002.D

Compound	1	2	3	4	5	6	7	AVG.	%RSD
1) TM Methane									
ug/L		1.23	4.10	13.23	44.10	110.25	220.50		
RF		1.100E+06	1.004E+06	1.003E+06	9.970E+05	1.028E+06	9.768E+05	1.018E+06	4.25%
2) S Acetylene									
ug/L	1.007	2.01	6.71	21.65	72.17	180.42	360.83		
RF	322059.5829	3.304E+05	3.380E+05	3.710E+05	3.595E+05	3.697E+05	3.560E+05	3.495E+05	5.56%
3) TM Ethene									
ug/L	1.09	2.18	7.27	23.46	78.18	195.46	390.92		
RF	8.210E+05	8.669E+05	8.696E+05	9.069E+05	9.135E+05	9.418E+05	8.959E+05	8.879E+05	4.42%
4) TM Ethane									
ug/L	1.162	2.324	7.746	24.981	83.269	208.172	416.343		
RF	8.940E+05	9.414E+05	9.563E+05	9.856E+05	9.942E+05	1.023E+06	9.713E+05	9.666E+05	4.30%

Response Factor Report AG6890N-6

Method Path : D:\MSDCHEM\1\2012\METHOD\
Method File : 0126126RSK.M
Title :
Last Update : Fri Jan 27 11:26:56 2012
Response Via : Initial Calibration

Calibration Files
1 =0126126R008.D 2 =0126126R007.D 3 =0126126R006.D
4 =0126126R005.D 5 =0126126R004.D 6 =0126126R003.D

	Compound	1	2	3	4	5	6	Avg		%RSD
1)	TM Methane		1.100	1.004	1.003	0.997	1.028	1.018	E6	4.25
2)	S Acetylene	3.221	3.304	3.380	3.710	3.595	3.697	3.495	E5	5.56
3)	TM Ethene	8.210	8.669	8.696	9.069	9.135	9.418	8.879	E5	4.42
4)	TM Ethane	0.894	0.941	0.956	0.986	0.994	1.023	0.967	E6	4.30
5)	QualPropane							0.000		-1.00
6)	QualButane							0.000		-1.00

(#) = Out of Range ### Number of calibration levels exceeded format ###

Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\012612RSK\
Data File : 0126126R001.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 26 Jan 2012 5:14 pm
Operator : rh
Sample : 2010040-ibl1
Misc :
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jan 27 10:30:05 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 09:53:18 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) S Acetylene	8.013	25294373	72.370 ug/L
Spiked Amount 66.330 Range 66 - 153	Recovery = 109.11%		
Target Compounds			
1) TM Methane	1.536	589704	0.579 ug/L
3) TM Ethene	0.000	0	N.D. ug/L
4) TM Ethane	0.000	0	N.D. ug/L

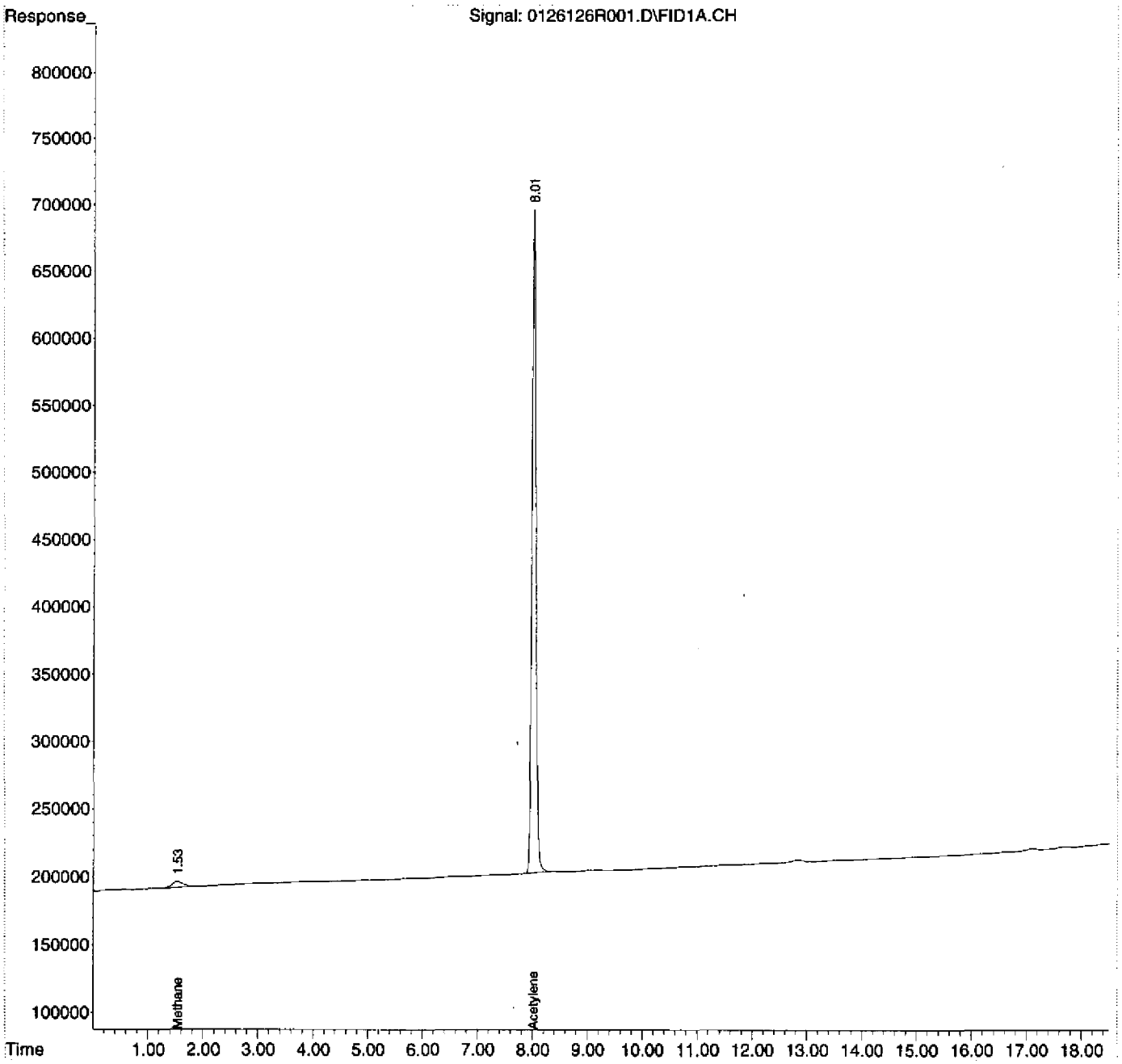
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\012612RSK\
Data File : 0126126R001.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 26 Jan 2012 5:14 pm
Operator : rh
Sample : 2010040-ibl1
Misc :
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jan 27 10:30:05 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 09:53:18 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm



Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\012612RSK\
Data File : 0126126R002.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 26 Jan 2012 5:42 pm
Operator : rh
Sample : 2010040-CAL7
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jan 27 09:19:53 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 09:19:46 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) S Acetylene	7.985	128462468	365.512 ug/L
Spiked Amount 66.330 Range 66 - 153	Recovery = 551.05%#		
Target Compounds			
1) TM Methane	1.519	215382184	215.738 ug/L
3) TM Ethene	8.362	350221237	401.340 ug/L
4) TM Ethane	8.993	404407946	425.684 ug/L

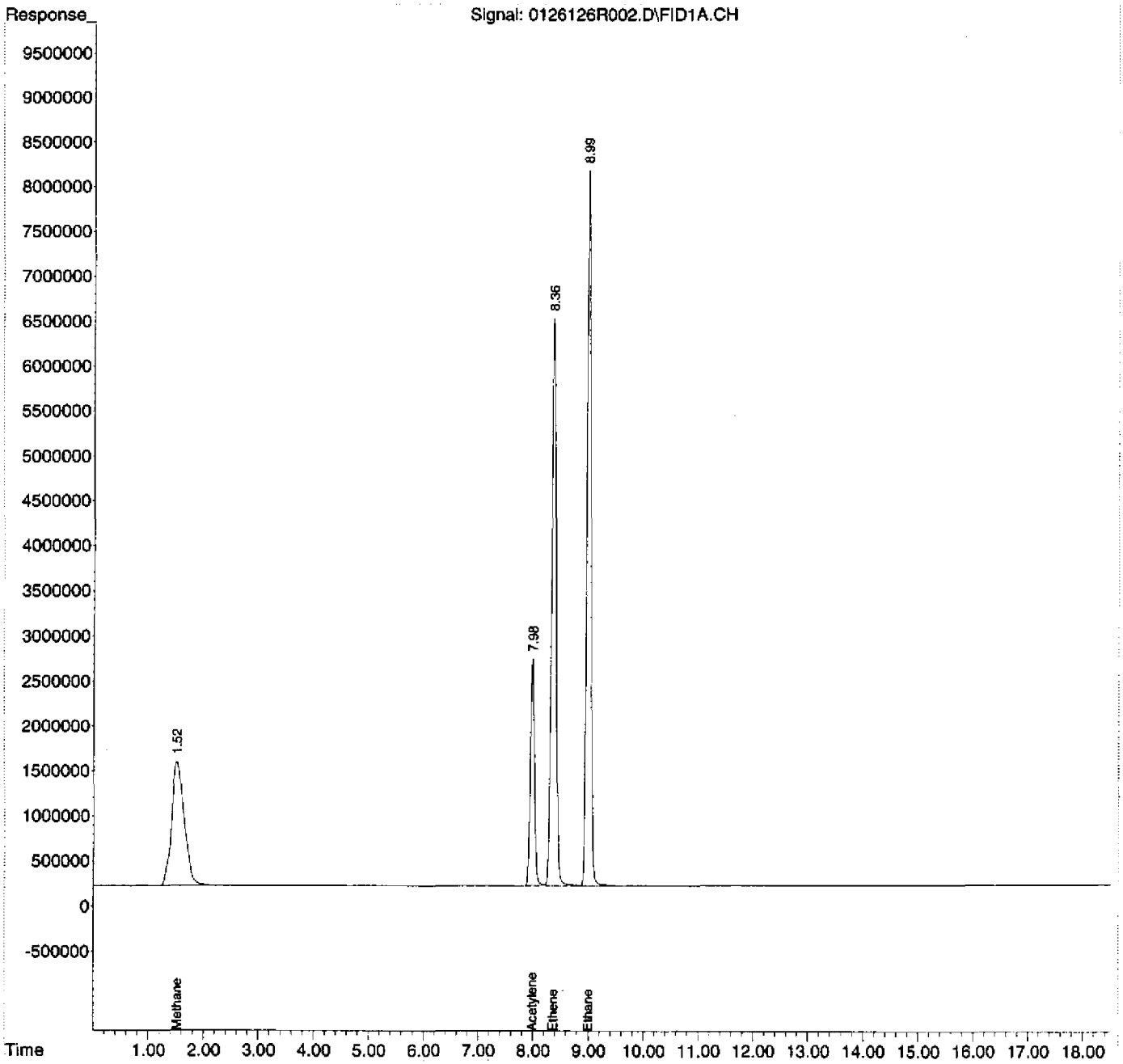
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\012612RSK\
Data File : 0126126R002.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 26 Jan 2012 5:42 pm
Operator : rh
Sample : 2010040-CAL7
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jan 27 09:19:53 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 09:19:46 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm



Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\012612RSK\
Data File : 0126126R003.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 26 Jan 2012 6:17 pm
Operator : rh
Sample : 2010040-CAL6
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jan 27 09:19:34 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 09:19:26 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) S Acetylene	7.982	66702184	194.665 ug/L
Spiked Amount 66.330 Range 66 - 153		Recovery = 293.48%#	
Target Compounds			
1) TM Methane	1.521	113285210	116.945 ug/L
3) TM Ethene	8.365	184084316	215.885 ug/L
4) TM Ethane	8.995	212992811	229.807 ug/L

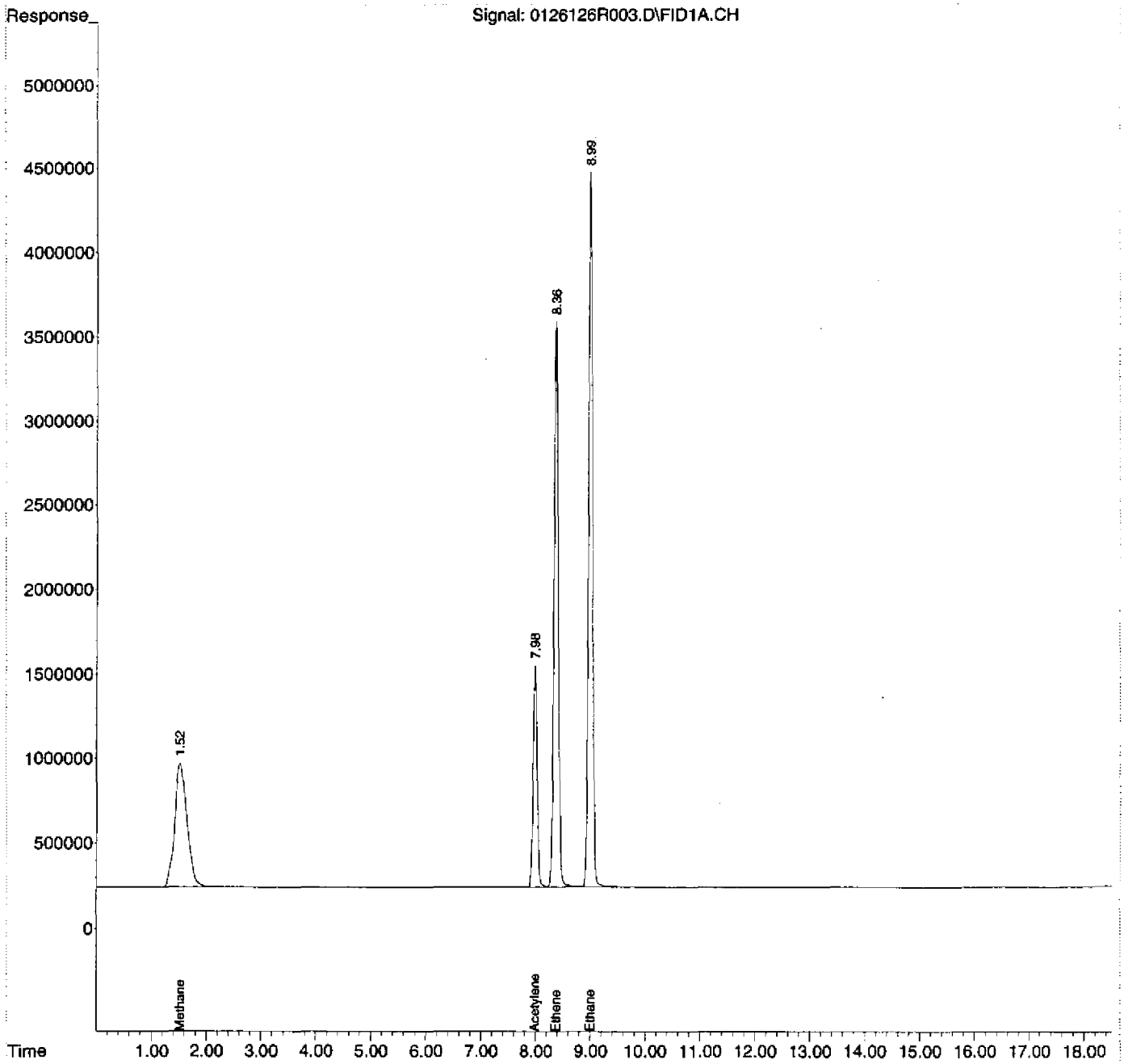
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\012612RSK\
Data File : 0126126R003.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 26 Jan 2012 6:17 pm
Operator : rh
Sample : 2010040-CAL6
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jan 27 09:19:34 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 09:19:26 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm



00037

Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\012612RSK\
Data File : 0126126R004.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 26 Jan 2012 6:50 pm
Operator : rh
Sample : 2010040-CAL5
Misc :
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jan 27 09:19:19 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 09:19:11 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) S Acetylene	7.982	25945224	79.002 ug/L
Spiked Amount 66.330 Range 66 - 153		Recovery =	119.10%
Target Compounds			
1) TM Methane	1.522	43965430	46.859 ug/L
3) TM Ethene	8.368	71418710	86.350 ug/L
4) TM Ethane	8.998	82785070	91.913 ug/L

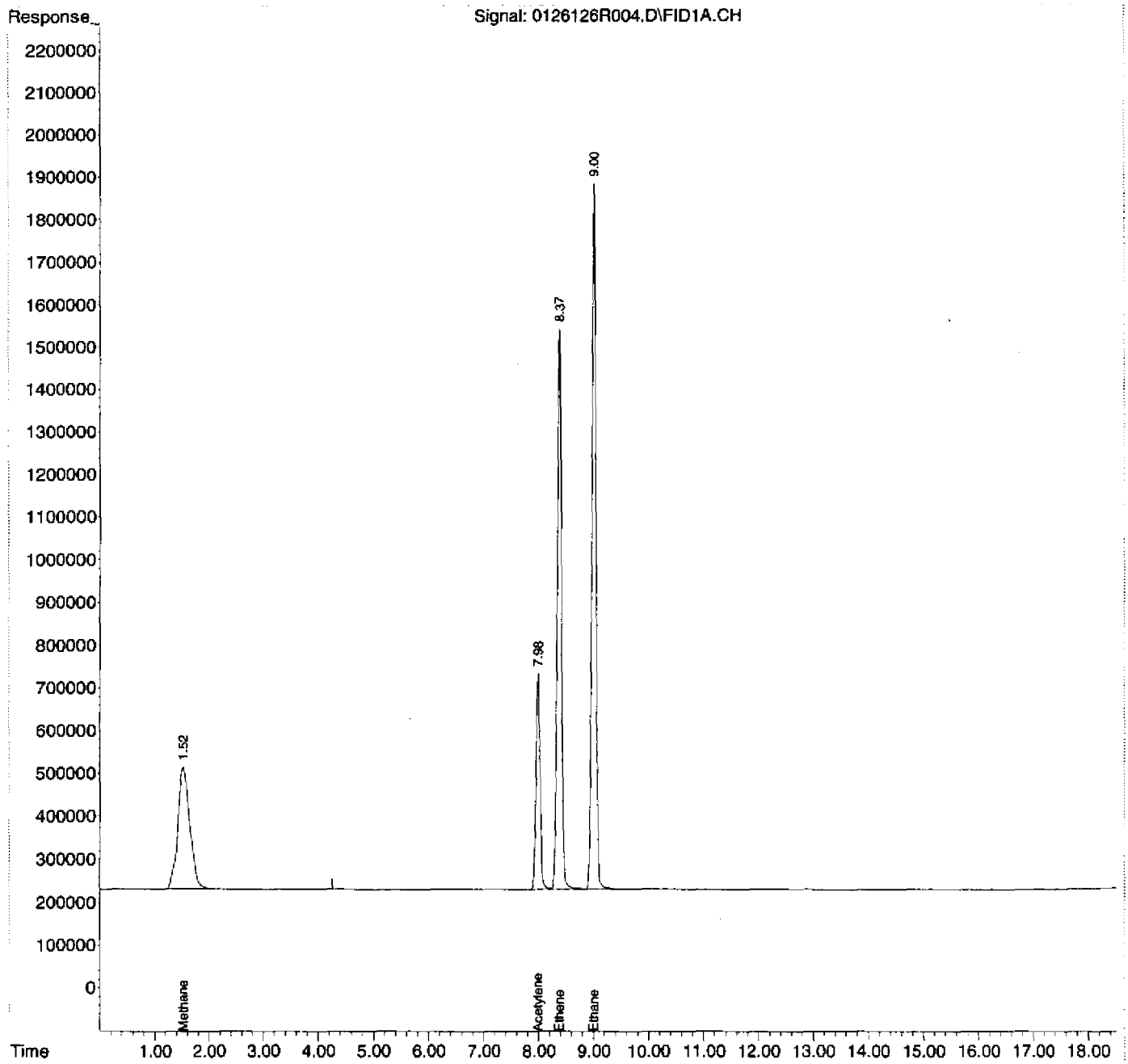
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed) 91542

Data Path : D:\MSDCHEM\1\2012\DATA\012612RSK\
Data File : 0126126R004.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 26 Jan 2012 6:50 pm
Operator : rh
Sample : 2010040-CAL5
Misc :
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jan 27 09:19:19 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 09:19:11 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm



Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\012612RSK\
Data File : 0126126R005.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 26 Jan 2012 7:24 pm
Operator : rh
Sample : 2010040-CAL4
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jan 27 09:19:01 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 09:18:54 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) S Acetylene	7.980	8031683	27.257 ug/L
Spiked Amount 66.330 Range 66 - 153	Recovery = 41.09%#		
Target Compounds			
1) TM Methane	1.523	13268375	15.122 ug/L
3) TM Ethene	8.368	21272017	27.225 ug/L
4) TM Ethane	8.999	24621194	28.814 ug/L

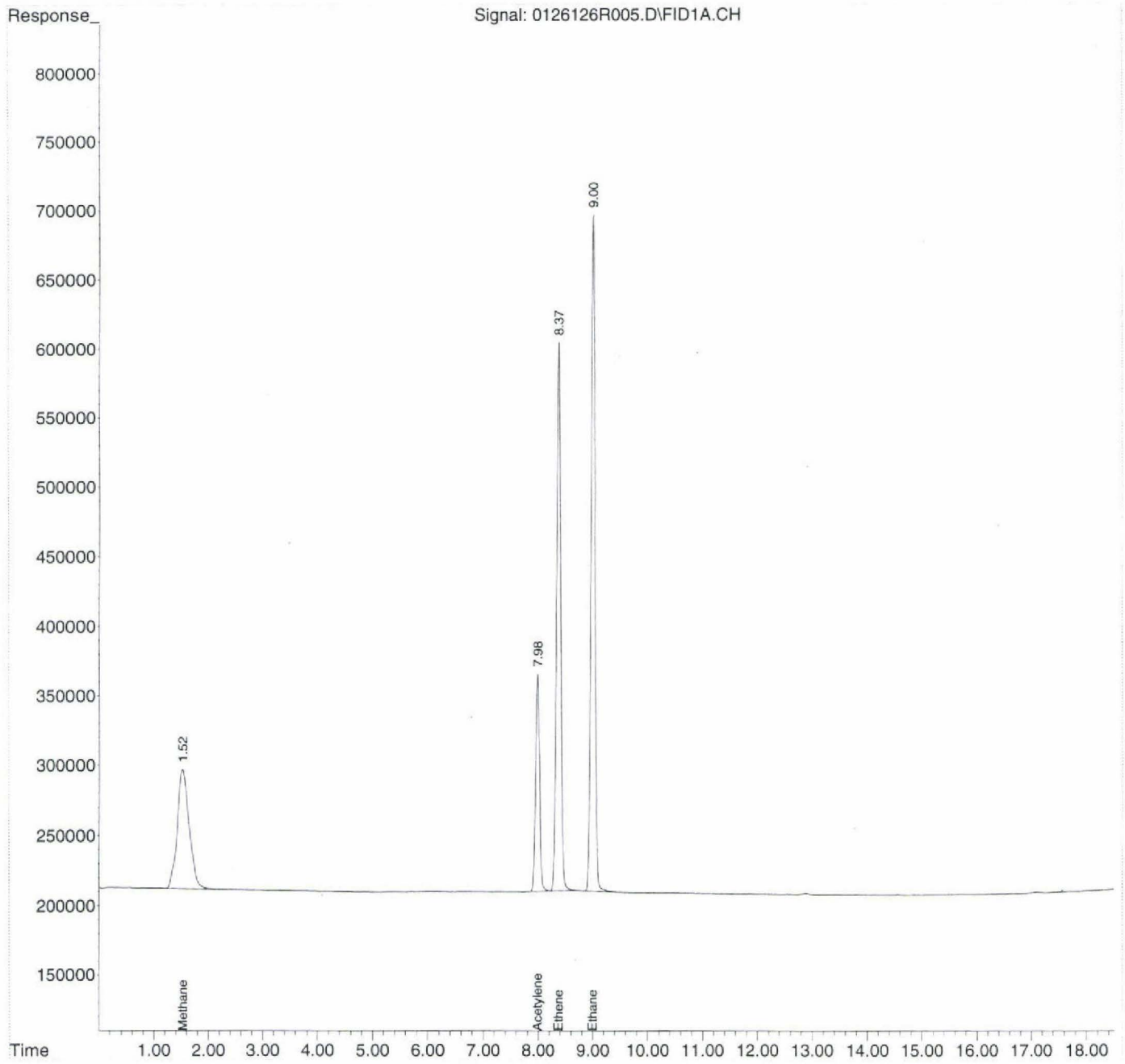
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\012612RSK\
Data File : 0126126R005.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 26 Jan 2012 7:24 pm
Operator : rh
Sample : 2010040-CAL4
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jan 27 09:19:01 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 09:18:54 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm



2-14.
40A RV

Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\012612RSK\
Data File : 0126126R006.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 26 Jan 2012 7:58 pm
Operator : rh
Sample : 2010040-CAL3
Misc :
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jan 27 09:18:44 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 09:18:36 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm

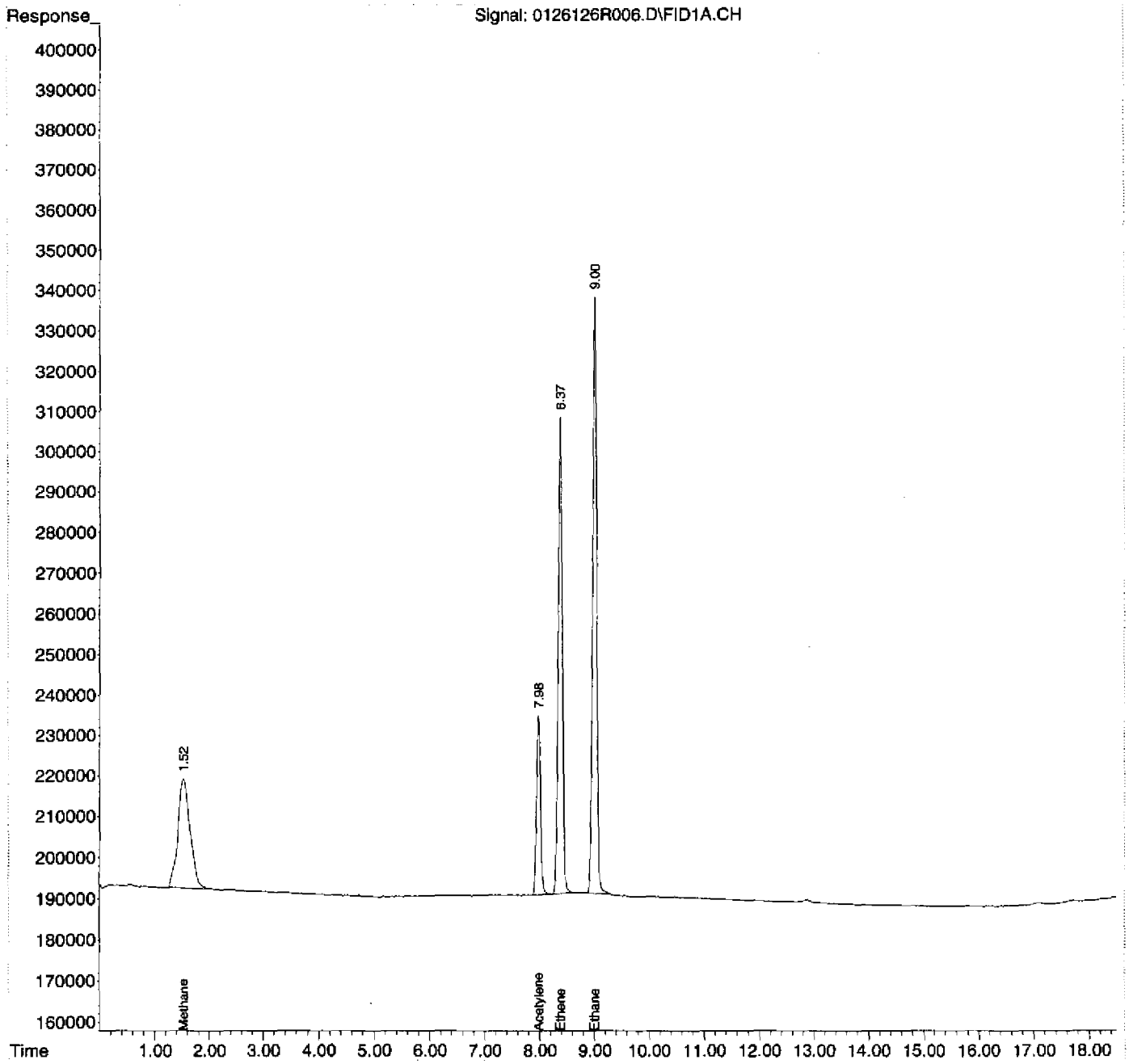
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) S Acetylene	7.979	2268728	8.271 ug/L
Spiked Amount 66.330 Range 66 - 153	Recovery =	12.47%#	
Target Compounds			
1) TM Methane	1.522	4118226	4.869 ug/L
3) TM Ethene	8.369	6324323	8.412 ug/L
4) TM Ethane	9.000	7407829	8.966 ug/L

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : D:\MSDCHEM\1\2012\DATA\012612RSK\
Data File : 0126126R006.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 26 Jan 2012 7:58 pm
Operator : rh
Sample : 2010040-CAL3
Misc :
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jan 27 09:18:44 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 09:18:36 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm



: 00042

DIM0279368

DIM0279432

Quantitation Report (Not Reviewed) 01547

Data Path : D:\MSDCHEM\1\2012\DATA\012612RSK\
Data File : 0126126R007.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 26 Jan 2012 8:31 pm
Operator : rh
Sample : 2010040-CAL2
Misc :
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jan 27 09:18:23 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 09:18:10 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) S Acetylene	7.976	665342	2.426 ug/L
Spiked Amount 66.330 Range 66 - 153	Recovery =	3.66%#	
Target Compounds			
1) TM Methane	1.524	1354094	1.657 ug/L
3) TM Ethene	8.368	1891551	2.657 ug/L
4) TM Ethane	9.000	2187768	2.770 ug/L

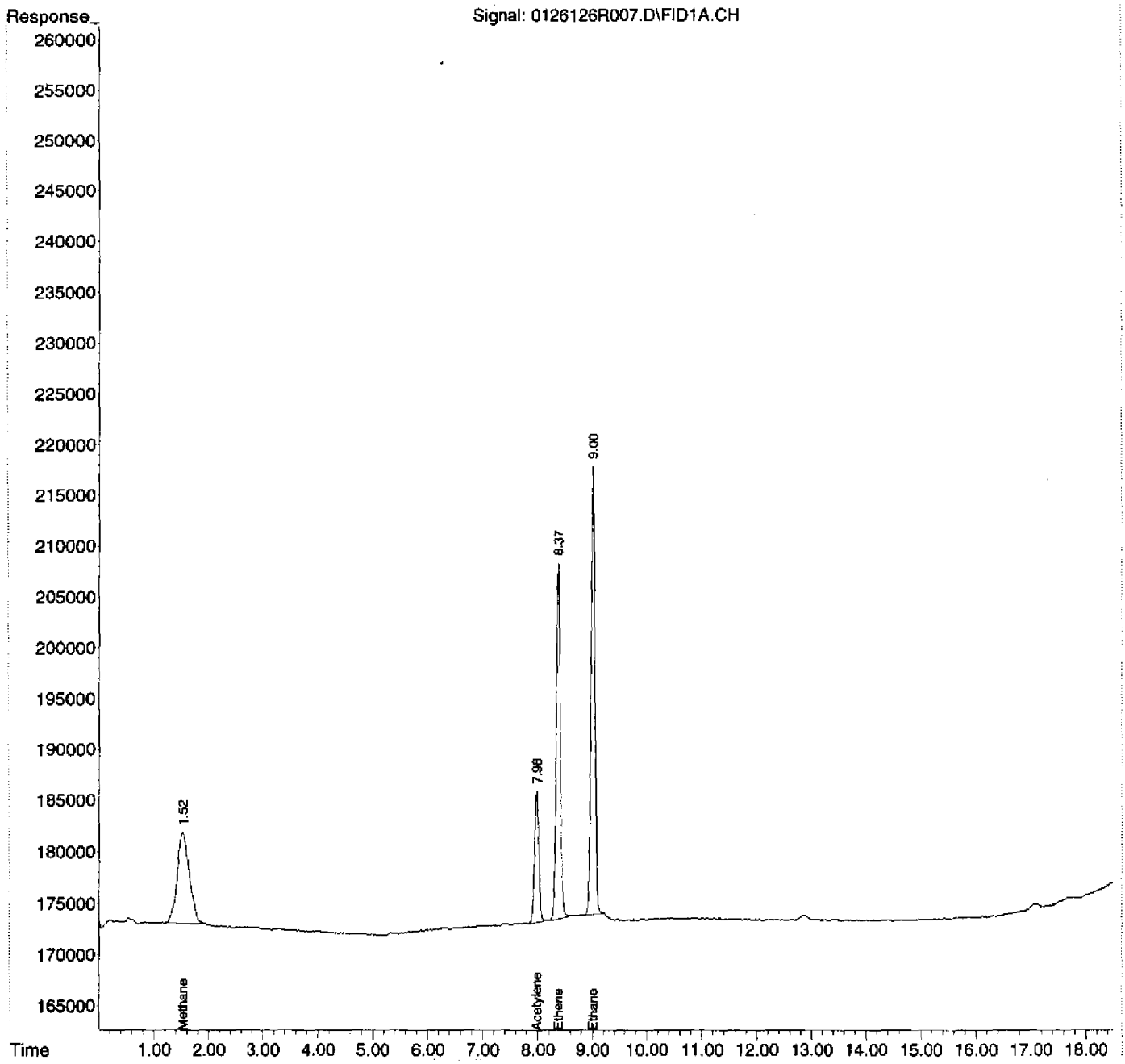
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\012612RSK\
Data File : 0126126R007.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 26 Jan 2012 8:31 pm
Operator : rh
Sample : 2010040-CAL2
Misc :
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jan 27 09:18:23 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 09:18:10 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm



Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\012612RSK\
Data File : 0126126R008.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 26 Jan 2012 9:04 pm
Operator : rh
Sample : 2010040-CAL1
Misc :
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Jan 27 09:17:33 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 09:16:46 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
2) S Acetylene	7.976	324314	NoCal	ug/L
Spiked Amount 66.330 Range 66 - 153	Recovery = 0.00%#			
Target Compounds				
1) TM Methane	1.519	766241	NoCal	ug/L
3) TM Ethene	8.368	895692	NoCal	ug/L
4) TM Ethane	9.000	1038795	NoCal	ug/L

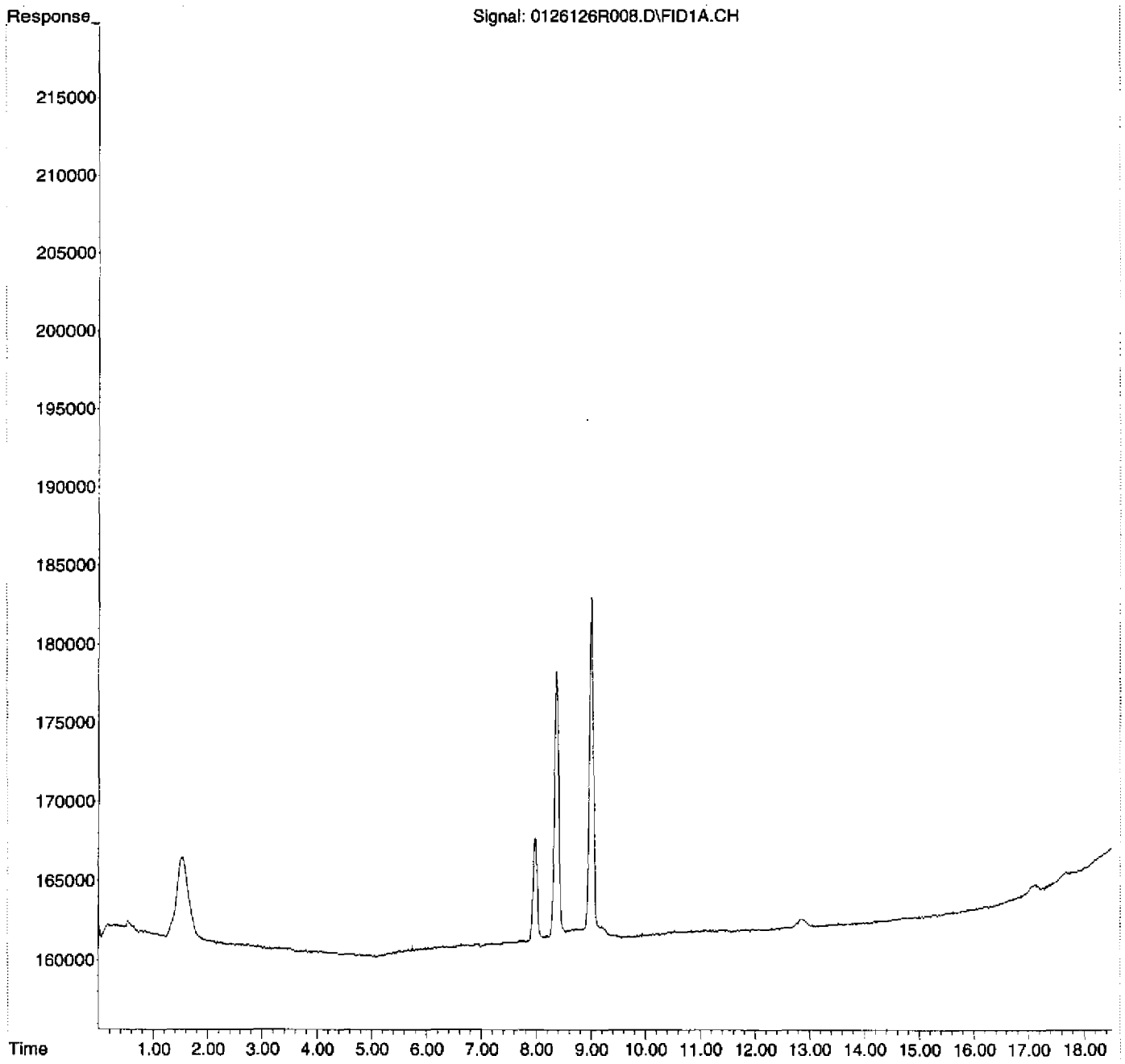
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\012612RSK\
Data File : 0126126R008.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 26 Jan 2012 9:04 pm
Operator : rh
Sample : 2010040-CAL1
Misc :
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Jan 27 09:17:33 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 09:16:46 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm



SECOND SOURCE CALIBRATION VERIFICATION REPORT

Instrument Name: AG6890N-6
File Name: 0126126R009.D
Date Acquired: 1/26/2012
Operator: rh

Second Source Std: 1H18014

Analyte	Spike ug/L	Calculated ug/L	QC Limits	%R	Status
Methane	43.723	40.910	70 -130	93.6%	pass
Acetylene	70.346	73.371	70 -130	104.3%	pass
Ethene	75.758	75.217	70 -130	99.3%	pass
Ethane	81.169	80.900	70 -130	99.7%	pass

Quantitation Report (Not Reviewed) 01552

Data Path : D:\MSDCHEM\1\2012\DATA\012612RSK\
Data File : 0126126R009.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 26 Jan 2012 9:32 pm
Operator : rh
Sample : 2010040-SCV1
Misc :
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Jan 27 11:29:04 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) S Acetylene	7.968	25644386	73.371 ug/L
Spiked Amount 66.330 Range 66 - 153		Recovery =	110.62%
Target Compounds			
1) TM Methane	1.521	41647328	40.910 ug/L
3) TM Ethene	8.364	66787780	75.217 ug/L
4) TM Ethane	8.997	78195027	80.900 ug/L
5) Qual Propane	0.000	0	N.D.
6) Qual Butane	0.000	0	N.D.

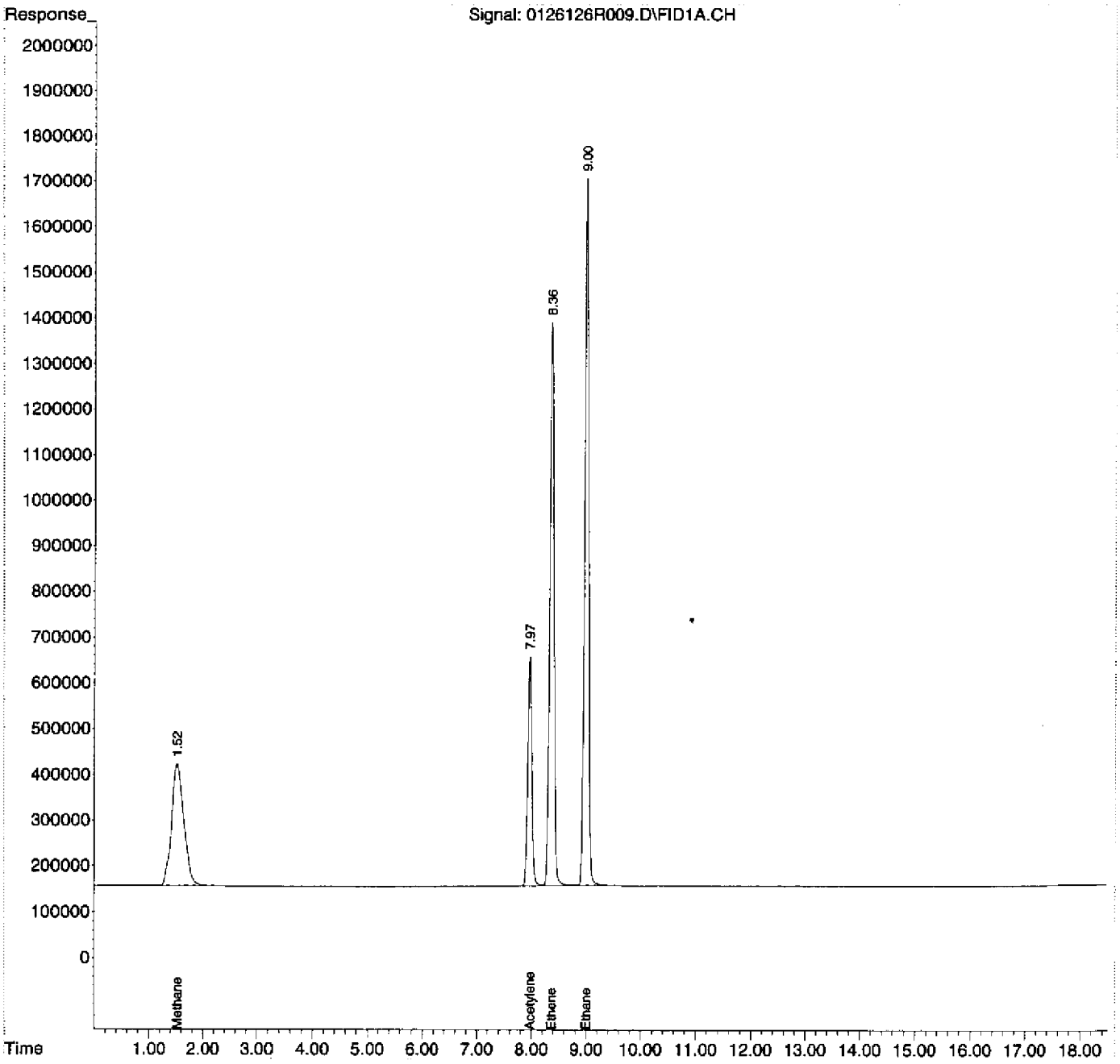
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\012612RSK\
Data File : 0126126R009.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 26 Jan 2012 9:32 pm
Operator : rh
Sample : 2010040-SCV1
Misc :
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Jan 27 11:29:04 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm



01554

Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\012612RSK\
Data File : 0126126R010.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 26 Jan 2012 10:08 pm
Operator : rh
Sample : DIAG MIXED GAS
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Jan 27 11:48:42 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) S Acetylene	7.975	7518601	21.511 ug/L
Spiked Amount 66.330 Range 66 - 153		Recovery =	32.43%#
Target Compounds			
1) TM Methane	1.511	3903857	3.835 ug/L
3) TM Ethene	8.371	6989111	7.871 ug/L
4) TM Ethane	9.020	7037708	7.281 ug/L
5) Qual Propane	12.895	10460329	NoCal
6) Qual Butane	17.725	12892720	NoCal

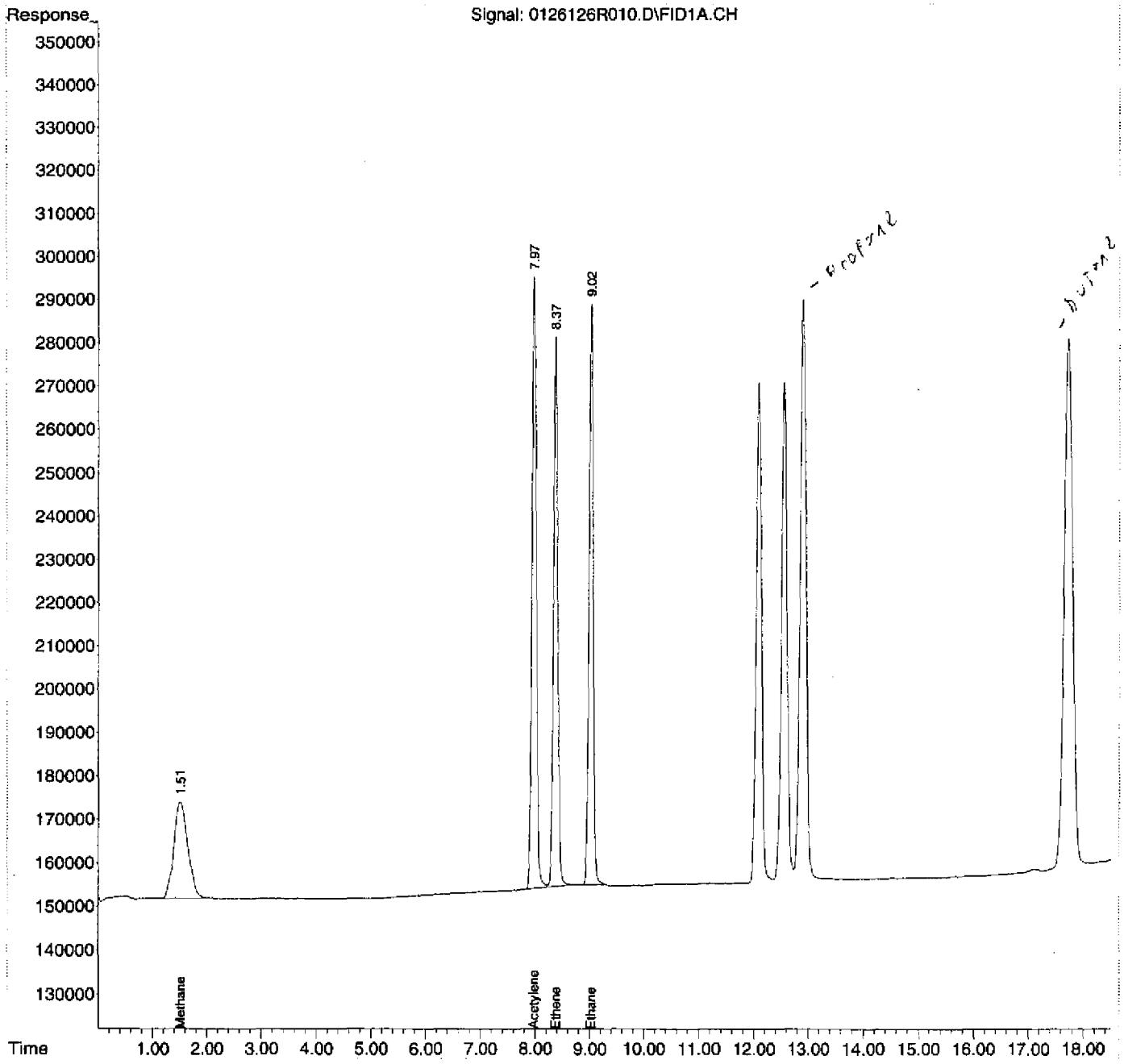
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\012612RSK\
Data File : 0126126R010.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 26 Jan 2012 10:08 pm
Operator : rh
Sample : DIAG MIXED GAS
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Jan 27 11:48:42 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm



00051

Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\012612RSK\
Data File : 0126126R011.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 26 Jan 2012 10:35 pm
Operator : rh
Sample : PROPANE
Misc :
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Jan 27 11:49:06 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) S Acetylene	0.000	0	N.D. ug/L
Spiked Amount 66.330 Range 66 - 153	Recovery =	0.00%#	
Target Compounds			
1) TM Methane	0.000	0	N.D. ug/L
3) TM Ethene	0.000	0	N.D. ug/L
4) TM Ethane	0.000	0	N.D. ug/L
5) Qual Propane	12.883	237365336	NoCal
6) Qual Butane	0.000	0	N.D.

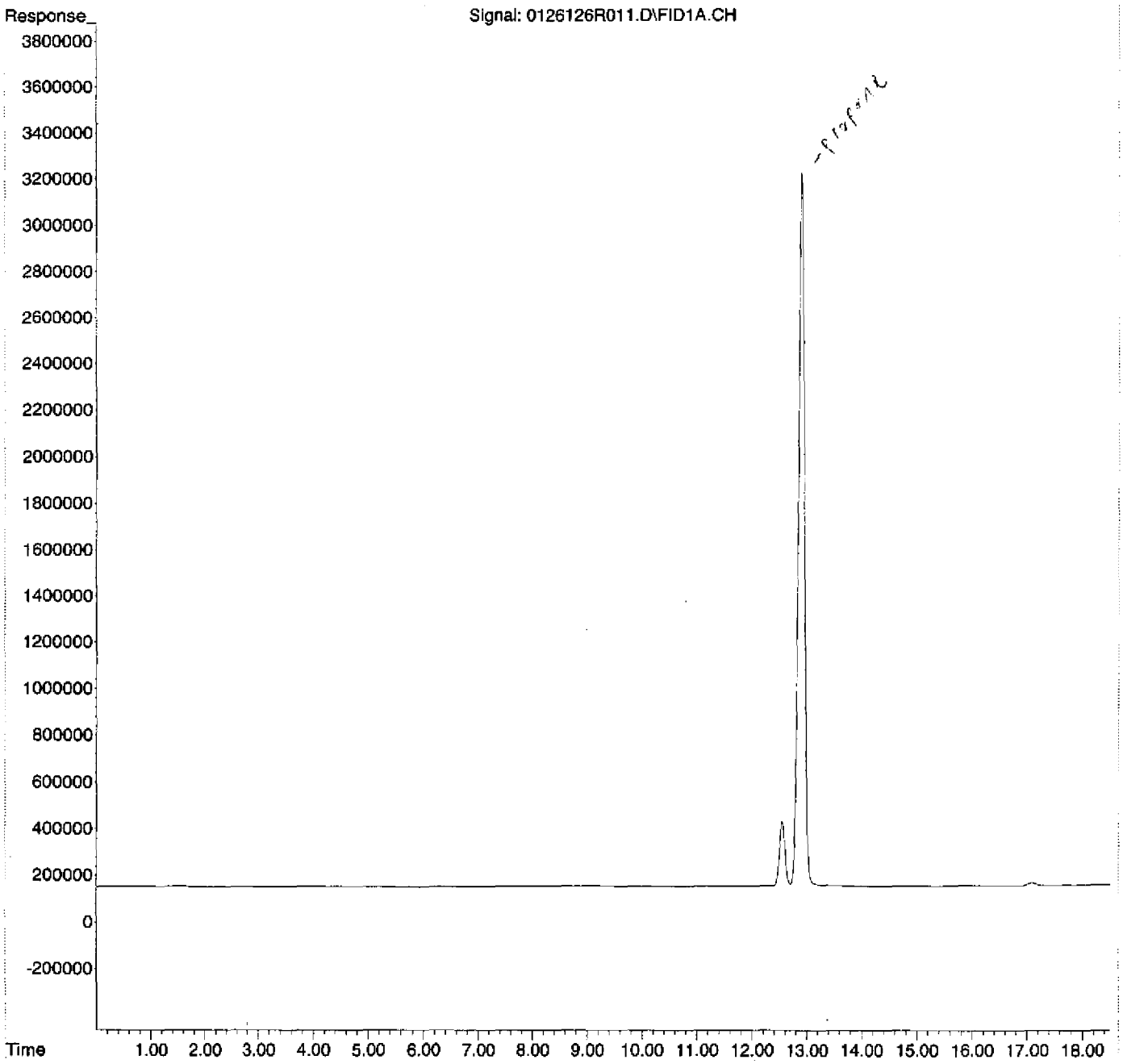
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\012612RSK\
Data File : 0126126R011.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 26 Jan 2012 10:35 pm
Operator : rh
Sample : PROPANE
Misc :
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Jan 27 11:49:06 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm



Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\012612RSK\
Data File : 0126126R012.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 26 Jan 2012 11:11 pm
Operator : rh
Sample : BUTANE
Misc :
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Jan 27 11:49:40 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) S Acetylene	0.000	0	N.D. ug/L
Spiked Amount 66.330	Range 66 - 153	Recovery =	0.00%#
Target Compounds			
1) TM Methane	0.000	0	N.D. ug/L
3) TM Ethene	0.000	0	N.D. ug/L
4) TM Ethane	9.023	1000416	1.035 ug/L
5) Qual Propane	12.899	34506244	NoCal
6) Qual Butane	17.710	56367388	NoCal

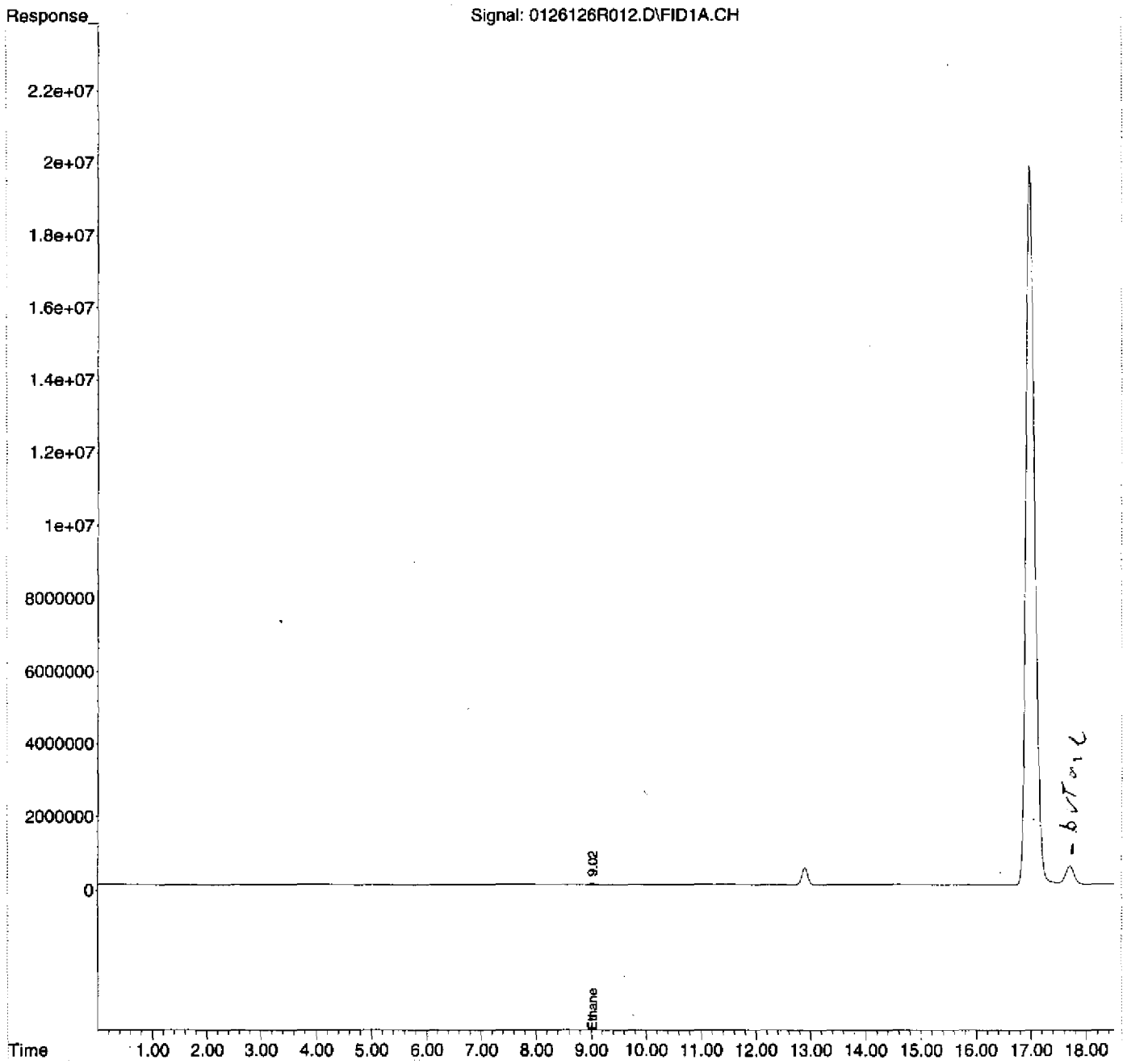
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\012612RSK\
Data File : 0126126R012.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 26 Jan 2012 11:11 pm
Operator : rh
Sample : BUTANE
Misc :
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Jan 27 11:49:40 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm



01568

SDG: 12039A

Instrument: AG6890-N-6

Analysis Date: 2/8/12

SAMPLE DATA

G:\USER\ESAT\1 Organic Group\Forms\DataPackageSeparators.doc

00056

01561

Injection Log

Operator: rh
Directory: D:\MSDCHEM\1\2012\DATA\020812RSK\

Vial	File Name	Mult	Sample Info	Misc Info	Date Acquired
1	0208126R01.D	0	2020026-CCV1	2B08005	08 Feb 2012 4:14 pm
2	0208126R02.D	0	2020026-LCV1	2B08003	08 Feb 2012 4:41 pm
3	0208126R03.D	0	2020026-LCV2	2B08004	08 Feb 2012 5:15 pm
4	0208126R04.D	0	B2B0032-BLK1	MB	08 Feb 2012 5:42 pm
5	0208126R05.D	0	B2B0032-BS1	LCS	08 Feb 2012 6:18 pm
6	0208126R06.D	0	1201034-10	HW01	08 Feb 2012 6:45 pm
7	0208126R07.D	0	1202005-11RE1	HW35 16.1 ML	08 Feb 2012 7:20 pm
8	0208126R08.D	0	B2B0032-MS1	MS 17-02	08 Feb 2012 7:46 pm
9	0208126R09.D	0	B2B0032-MSD1	MSD 17-02	08 Feb 2012 8:21 pm
10	0208126R10.D	0	1202017-02	HW45	08 Feb 2012 8:48 pm
11	0208126R11.D	0	1202017-03	HW45	08 Feb 2012 9:22 pm
12	0208126R12.D	0	1202017-05	HW43	08 Feb 2012 9:49 pm
13	0208126R13.D	0	1202017-06	HW43-P	08 Feb 2012 10:23 pm
14	0208126R14.D	0	1202020-03	HW31	08 Feb 2012 10:50 pm
15	0208126R15.D	0	1202020-04	HW31-P	08 Feb 2012 11:24 pm
16	0208126R16.D	0	1202020-05	HW31Z	08 Feb 2012 11:51 pm
17	0208126R17.D	0	1202020-08	HW30	09 Feb 2012 12:25 am
18	0208126R18.D	0	1202020-09	HW30-P	09 Feb 2012 12:51 am
19	0208126R19.D	0	1202020-11	HW15A	09 Feb 2012 1:18 am
20	0208126R20.D	0	1202020-12	HW15A-P	09 Feb 2012 1:53 am
21	0208126R21.D	0	2020026-IBL1	IB	09 Feb 2012 2:19 am
22	0208126R22.D	0	1202017-01	EB02	09 Feb 2012 2:46 am
23	0208126R23.D	0	1202017-04	TB24	09 Feb 2012 3:21 am
24	0208126R24.D	0	1202017-07	TB23	09 Feb 2012 3:47 am
25	0208126R25.D	0	1202020-06	TB25	09 Feb 2012 4:13 am
26	0208126R26.D	0	1202020-07	FB11	09 Feb 2012 4:48 am
27	0208126R27.D	0	1202020-10	TB26	09 Feb 2012 5:15 am
28	0208126R28.D	0	1202020-13	TB28	09 Feb 2012 5:41 am
29	0208126R29.D	0	2020026-CCV2	2B08005	09 Feb 2012 6:16 am

Response Factor Report AG6890N-6

Method Path : D:\MSDCHEM\1\2012\METHOD\
Method File : 0126126RSK.M
Title :
Last Update : Fri Jan 27 11:26:56 2012
Response Via : Initial Calibration

Calibration Files
1 =0126126R008.D 2 =0126126R007.D 3 =0126126R006.D
4 =0126126R005.D 5 =0126126R004.D 6 =0126126R003.D

	Compound	1	2	3	4	5	6	Avg	%RSD
1) TM	Methane		1.100	1.004	1.003	0.997	1.028	1.018 E6	4.25
2) S	Acetylene	3.221	3.304	3.380	3.710	3.595	3.697	3.495 E5	5.56
3) TM	Ethene	8.210	8.669	8.696	9.069	9.135	9.418	8.879 E5	4.42
4) TM	Ethane	0.894	0.941	0.956	0.986	0.994	1.023	0.967 E6	4.30
5) Qual	Propane							0.000	-1.00
6) Qual	Butane							0.000	-1.00

(#) = Out of Range ### Number of calibration levels exceeded format ###

01563

GC QA-QC Check Report

Daily Calibration File : D:\MSDCHEM\1\DATA\2010\120810RSK\120810A02.D
Time Acquired : 08 Dec 2010 11:12 am

File	Sample	Surrogate Recovery %
0208126R01.D	2020026-CCV1	36*
0208126R02.D	2020026-LCV1	2*
0208126R03.D	2020026-LCV2	3*
0208126R04.D	B2B0032-BLK1	118
0208126R05.D	B2B0032-BS1	119
0208126R06.D	1201034-10	113
0208126R07.D	1202005-11RE1	115
0208126R08.D	B2B0032-MS1	115
0208126R09.D	B2B0032-MSD1	117
0208126R10.D	1202017-02	117
0208126R11.D	1202017-03	116
0208126R12.D	1202017-05	118
0208126R13.D	1202017-06	118
0208126R14.D	1202020-03	116
0208126R15.D	1202020-04	116
0208126R16.D	1202020-05	115
0208126R17.D	1202020-08	116
0208126R18.D	1202020-09	114
0208126R19.D	1202020-11	112
0208126R20.D	1202020-12	111
0208126R21.D	2020026-IBL1	117
0208126R22.D	1202017-01	118
0208126R23.D	1202017-04	116
0208126R24.D	1202017-07	112
0208126R25.D	1202020-06	116
0208126R26.D	1202020-07	113
0208126R27.D	1202020-10	114
0208126R28.D	1202020-13	116
0208126R29.D	2020026-CCV2	37*

00059

DIM0279368

DIM0279449

Evaluate Continuing Calibration Report

Data Path : D:\MSDCHEM\1\2012\DATA\020812RSK\
Data File : 0208126R01.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 08 Feb 2012 4:14 pm
Operator : rh
Sample : 2020026-CCV1
Misc : 2B08005
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Feb 09 09:02:27 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
1 TM	Methane	1.018	1.112 E6	-9.2	111	0.00
2 S	Acetylene	349.516	386.955 E3	-10.7	104	-0.03
3 TM	Ethene	887.936	996.449 E3	-12.2	110	0.00
4 TM	Ethane	966.567	1090.241 E3	-12.8	111	0.00

Evaluate Continuing Calibration Report - Not Founds

5	QualPropane	0.000	0.000	0.0	0#	-12.89#
6	QualButane	0.000	0.000	0.0	0#	-17.72#

(#) = Out of Range SPCC's out = 0 CCC's out = 0

01565

Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\020812RSK\
Data File : 0208126R01.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 08 Feb 2012 4:14 pm
Operator : rh
Sample : 2020026-CCV1
Misc : 2B08005
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Feb 09 09:02:27 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) S Acetylene	7.950	8377577	23.969 ug/L
Spiked Amount 66.330 Range 66 - 153		Recovery =	36.14%#
Target Compounds			
1) TM Methane	1.528	14712664	14.452 ug/L
3) TM Ethene	8.366	23371712	26.321 ug/L
4) TM Ethane	9.002	27235321	28.177 ug/L
5) Qual Propane	0.000	0	N.D.
6) Qual Butane	0.000	0	N.D.

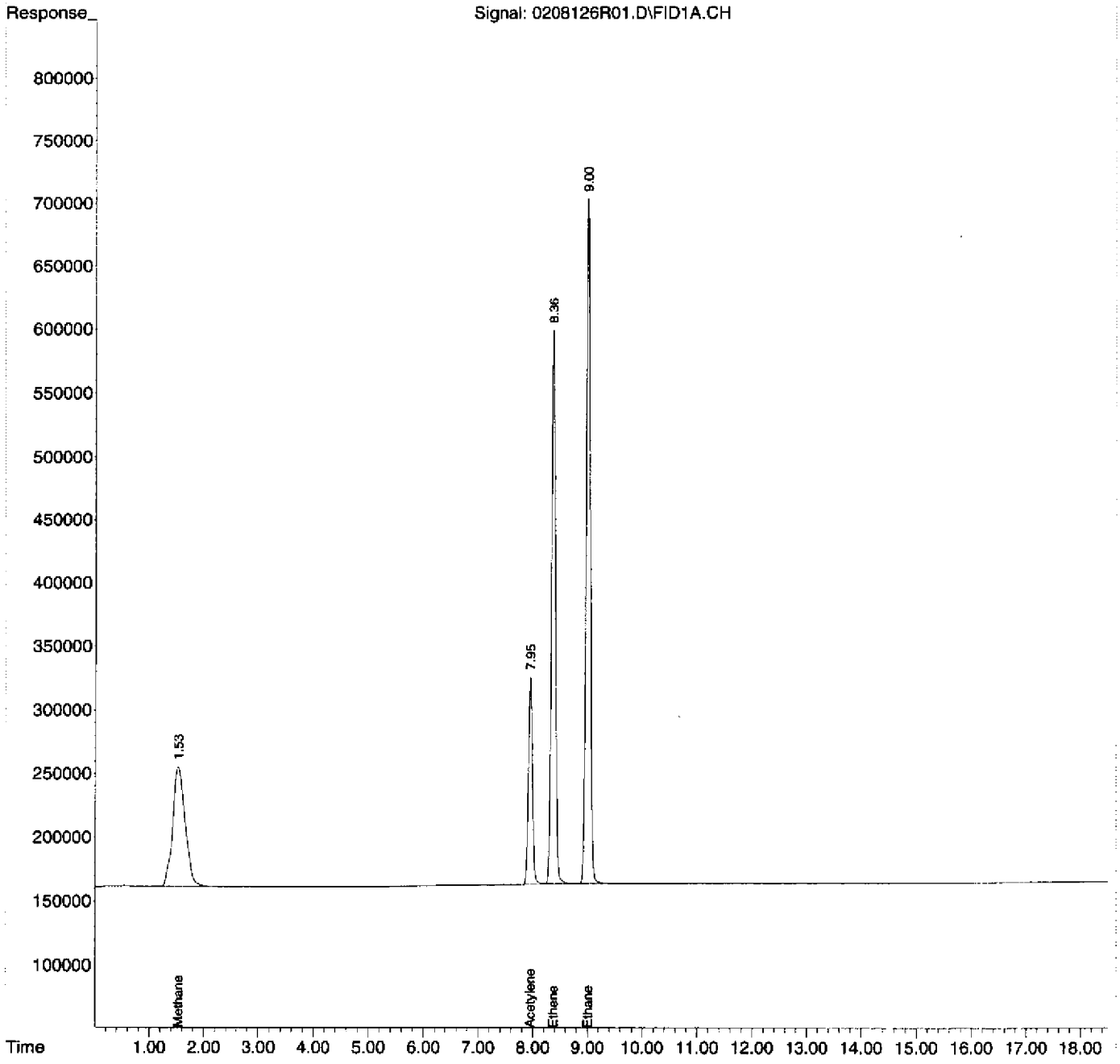
(f)=RT Delta > 1/2 Window (m)=manual int.

00061

Data Path : D:\MSDCHEM\1\2012\DATA\020812RSK\
Data File : 0208126R01.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 08 Feb 2012 4:14 pm
Operator : rh
Sample : 2020026-CCV1
Misc : 2B08005
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Feb 09 09:02:27 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm



00062

RSK-175 HC LCV REPORT

Instrument Name: AG6890N-6
File Name LCV1: 0208126R02
File Name LCV2: 0208126R03
Date Acquired: 02/08/12
Operator: rh

Analyte	Spike ug/L	Calculated ug/L	QC Limits	%R	Status
Methane	1.231	1.514	60 - 140	123.0%	pass
Acetylene	2.014	1.924	60 - 140	95.5%	NA
Ethene	1.091	1.13	60 - 140	103.6%	pass
Ethane	1.162	1.214	60 - 140	104.5%	pass

Ethene & ethane recovery calculated from LCV1 results
Methane recovery calculated from LCV2 results

Quantitation Report (Not Reviewed) 01568

Data Path : D:\MSDCHEM\1\2012\DATA\020812RSK\
Data File : 0208126R02.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 08 Feb 2012 4:41 pm
Operator : rh
Sample : 2020026-LCV1
Misc : 2B08003
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Feb 09 09:02:35 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) S Acetylene	7.959	358013	1.024 ug/L
Spiked Amount 66.330 Range 66 - 153		Recovery =	1.54%#
Target Compounds			
1) TM Methane	1.517	1012323	0.994 ug/L
3) TM Ethene	8.368	1003113	1.130 ug/L
4) TM Ethane	9.005	1172938	1.214 ug/L
5) Qual Propane	0.000	0	N.D.
6) Qual Butane	0.000	0	N.D.

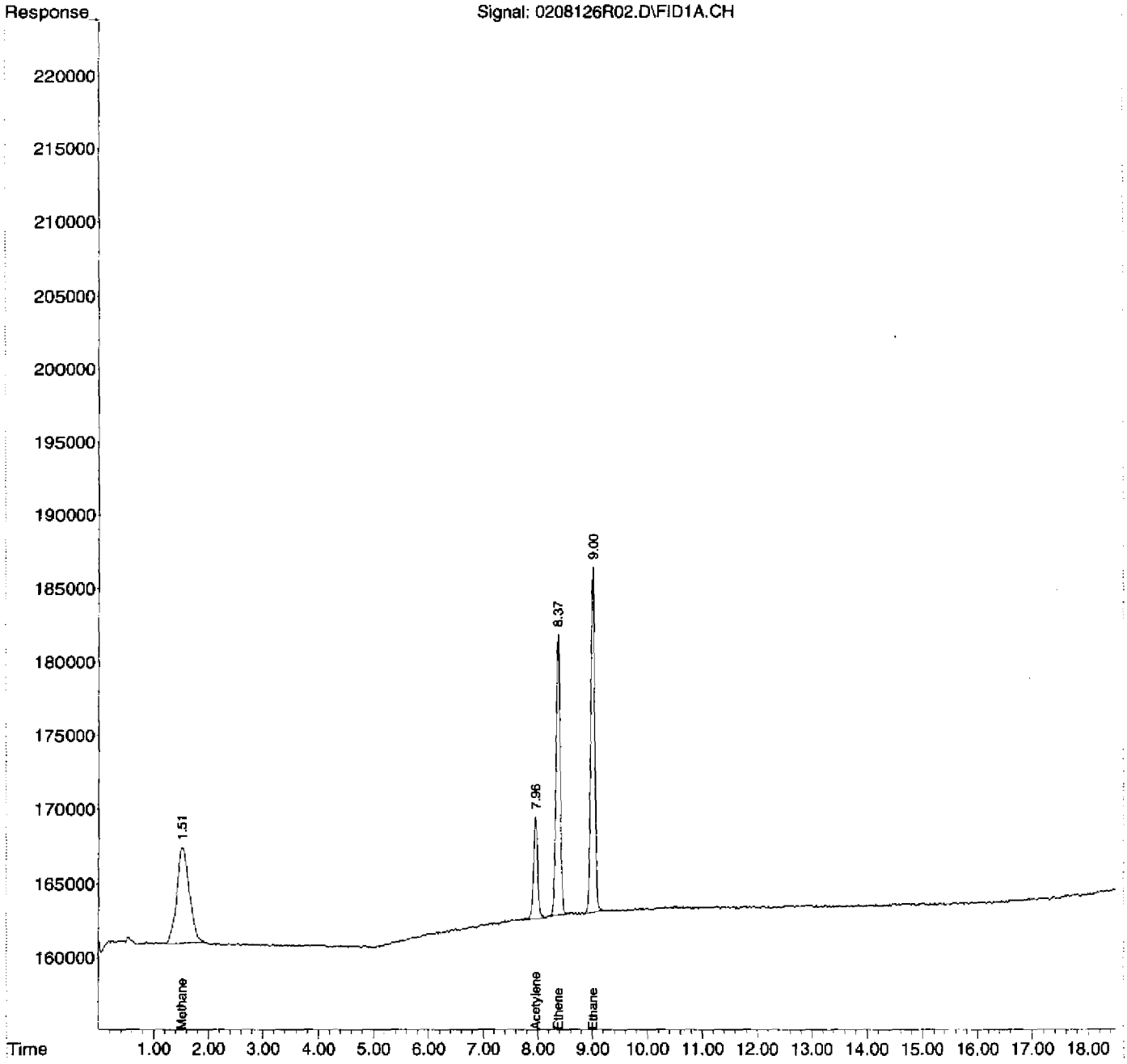
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\020812RSK\
Data File : 0208126R02.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 08 Feb 2012 4:41 pm
Operator : rh
Sample : 2020026-LCV1
Misc : 2B08003
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Feb 09 09:02:35 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm



Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\020812RSK\
Data File : 0208126R03.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 08 Feb 2012 5:15 pm
Operator : rh
Sample : 2020026-LCV2
Misc : 2B08004
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Feb 09 09:02:43 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) S Acetylene	7.959	672342	1.924 ug/L
Spiked Amount 66.330 Range 66 - 153	Recovery =	2.90%#	
Target Compounds			
1) TM Methane	1.530	1541715	1.514 ug/L
3) TM Ethene	8.370	1946981	2.193 ug/L
4) TM Ethane	9.006	2265537	2.344 ug/L
5) Qual Propane	0.000	0	N.D.
6) Qual Butane	0.000	0	N.D.

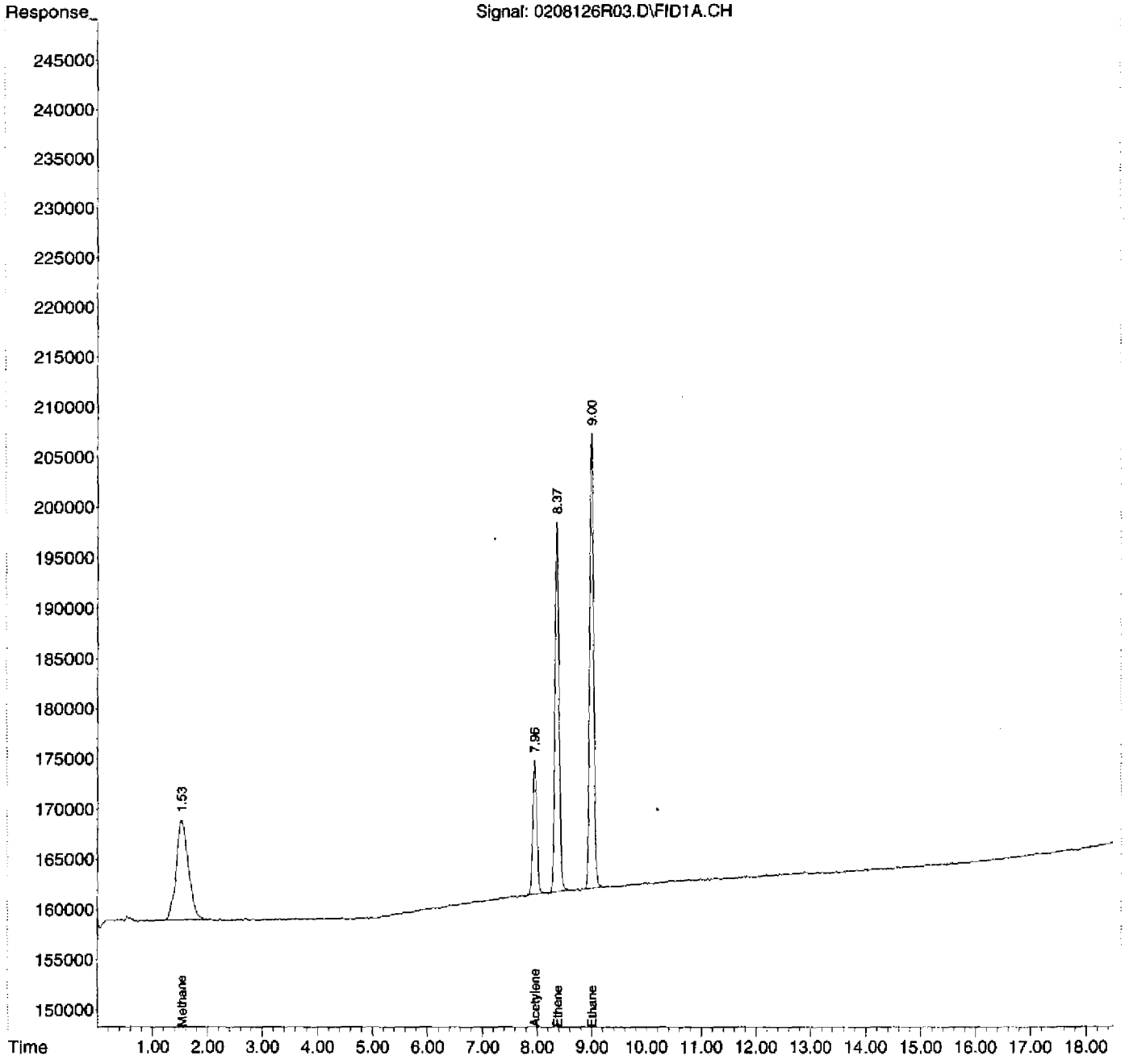
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\020812RSK\
Data File : 0208126R03.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 08 Feb 2012 5:15 pm
Operator : rh
Sample : 2020026-LCV2
Misc : 2B08004
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Feb 09 09:02:43 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm



: 00067

DIM0279457

DIM0279368

Quantitation Report (Not Reviewed) 01572

Data Path : D:\MSDCHEM\1\2012\DATA\020812RSK\
Data File : 0208126R04.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 08 Feb 2012 5:42 pm
Operator : rh
Sample : B2B0032-BLK1
Misc : MB
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Feb 09 09:02:50 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) S Acetylene	7.954	27437947	78.503 ug/L
Spiked Amount 66.330 Range 66 - 153		Recovery = 118.35%	
Target Compounds			
1) TM Methane	1.528	938031	0.921 ug/L
3) TM Ethene	0.000	0	N.D. ug/L
4) TM Ethane	0.000	0	N.D. ug/L
5) Qual Propane	0.000	0	N.D.
6) Qual Butane	0.000	0	N.D.

(f)=RT Delta > 1/2 Window (m)=manual int.

00068

DIM0279458

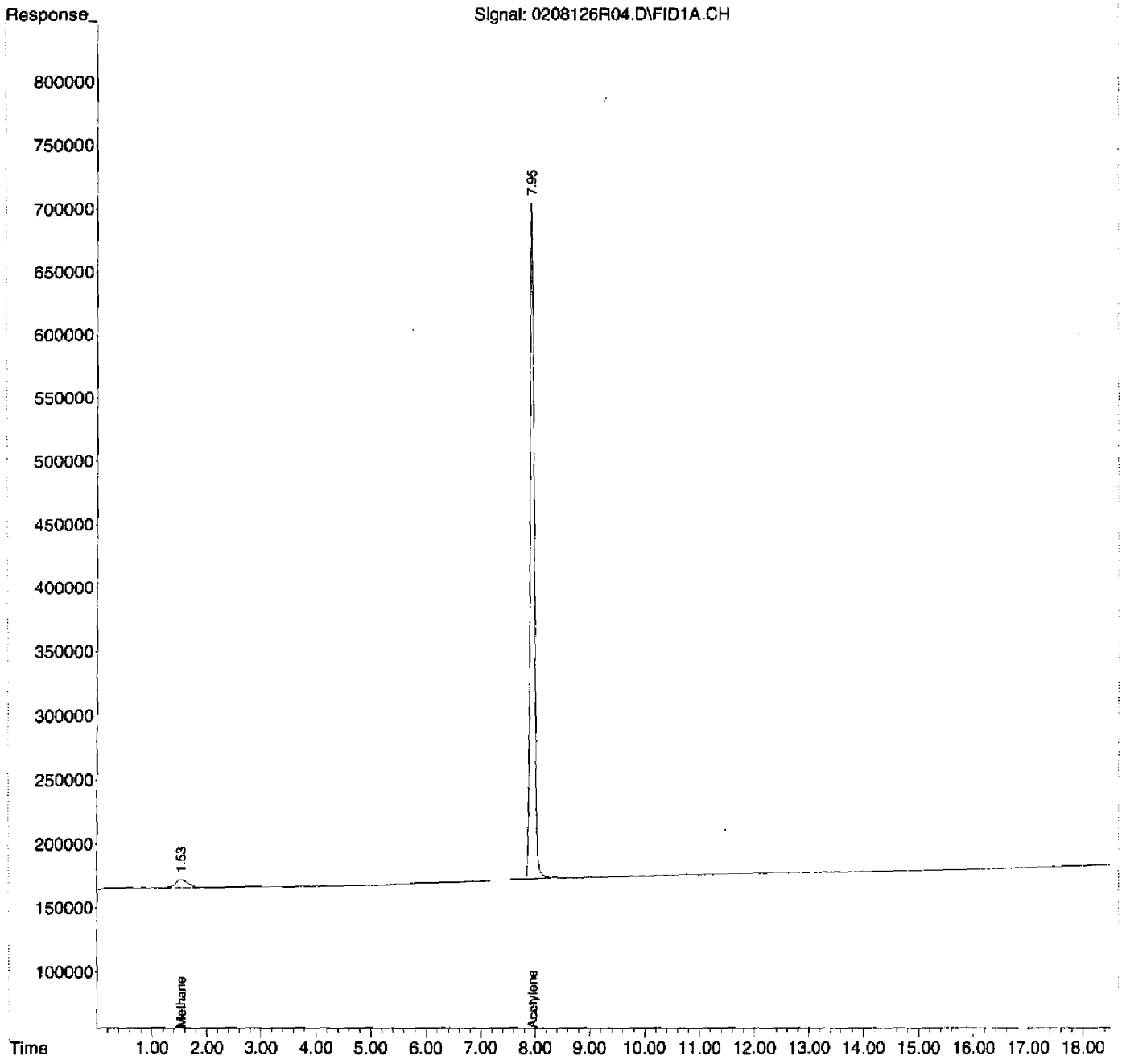
DIM0279368

Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\020812RSK\
Data File : 0208126R04.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 08 Feb 2012 5:42 pm
Operator : rh
Sample : B2B0032-BLK1
Misc : MB
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Feb 09 09:02:50 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm



RSK-175 LCSSUMMARY REPORT

Instrument Name: AG6890N-6
File Name: 0208126R05.D
Date Acquired: 2/8/2012
Operator: rh

Analyte	Spike ug/L	Calculated ug/L	QC Limits	%R	Status
Methane	44.099	47.723	70-130	108.2%	pass
Acetylene	72.166	79.241	66.4-153	109.8%	pass
Ethene	78.183	87.984	78-138	112.5%	pass
Ethane	83.269	93.878	77-137	112.7%	pass

Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\020812RSK\
Data File : 0208126R05.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 08 Feb 2012 6:18 pm
Operator : rh
Sample : B2B0032-BS1
Misc : LCS
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Feb 09 09:02:57 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) S Acetylene	7.953	27696121	79.241 ug/L
Spiked Amount 66.330 Range 66 - 153		Recovery =	119.46%
Target Compounds			
1) TM Methane	1.527	48583186	47.723 ug/L
3) TM Ethene	8.366	78124145	87.984 ug/L
4) TM Ethane	9.003	90739159	93.878 ug/L
5) Qual Propane	0.000	0	N.D.
6) Qual Butane	0.000	0	N.D.

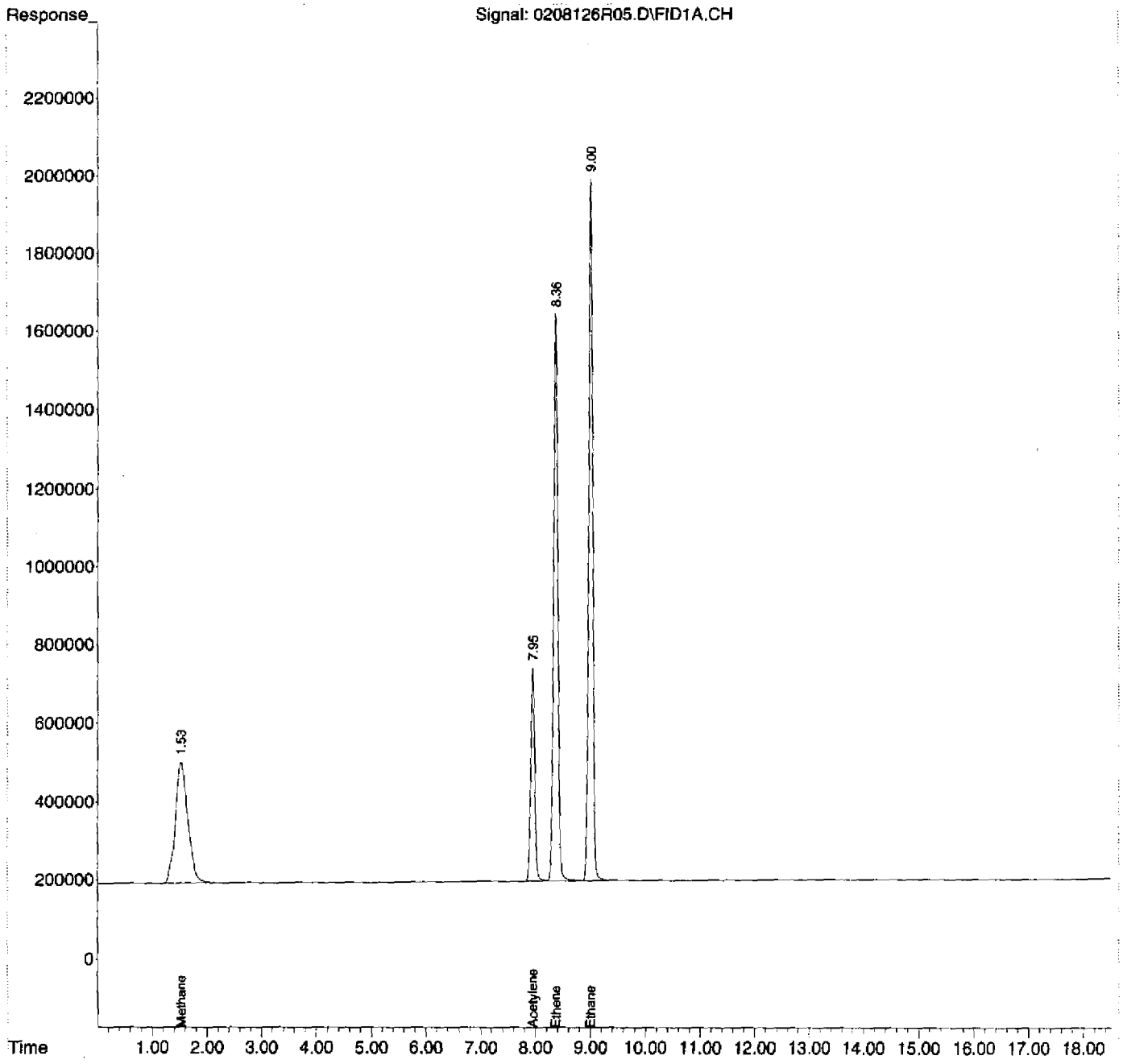
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\020812RSK\
Data File : 0208126R05.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 08 Feb 2012 6:18 pm
Operator : rh
Sample : B2B0032-BS1
Misc : LCS
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Feb 09 09:02:57 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm



01577

Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\020812RSK\
Data File : 0208126R14.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 08 Feb 2012 10:50 pm
Operator : rh
Sample : 1202020-03
Misc : HW31
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Feb 09 09:04:09 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) S Acetylene	7.956	26899506	76.962 ug/L
Spiked Amount 66.330	Range 66 - 153	Recovery =	116.03%
Target Compounds			
1) TM Methane	1.483	10535981322	10349.390 ug/L
3) TM Ethene	0.000	0	N.D. ug/L
4) TM Ethane	9.007	7054863	7.299 ug/L
5) Qual Propane	0.000	0	N.D.
6) Qual Butane	0.000	0	N.D.

(f)=RT Delta > 1/2 Window (m)=manual int.

-0.C.

RPD

0.15 mL

00073

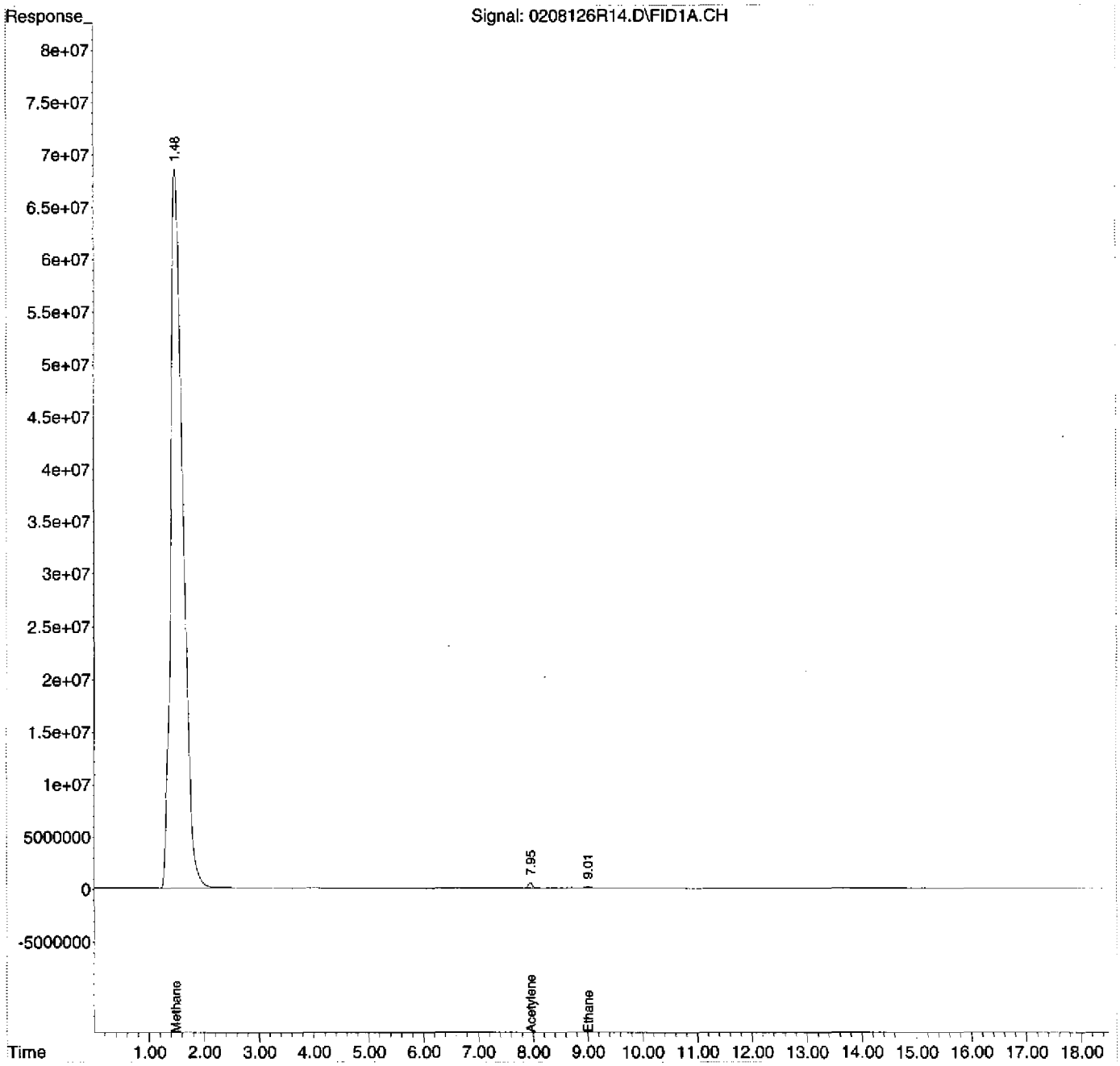
DIM0279368 DIM0279463

Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\020812RSK\
Data File : 0208126R14.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 08 Feb 2012 10:50 pm
Operator : rh
Sample : 1202020-03
Misc : HW31
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Feb 09 09:04:09 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm



Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\020812RSK\
Data File : 0208126R15.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 08 Feb 2012 11:24 pm
Operator : rh
Sample : 1202020-04
Misc : HW31-P
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Feb 09 09:04:17 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) S Acetylene	7.956	26869924	76.878 ug/L
Spiked Amount 66.330	Range 66 - 153	Recovery =	115.90%
Target Compounds			
1) TM Methane	1.523	74236501	72.922 ug/L
3) TM Ethene	0.000	0	N.D. ug/L
4) TM Ethane	0.000	0	N.D. ug/L
5) Qual Propane	0.000	0	N.D.
6) Qual Butane	0.000	0	N.D.

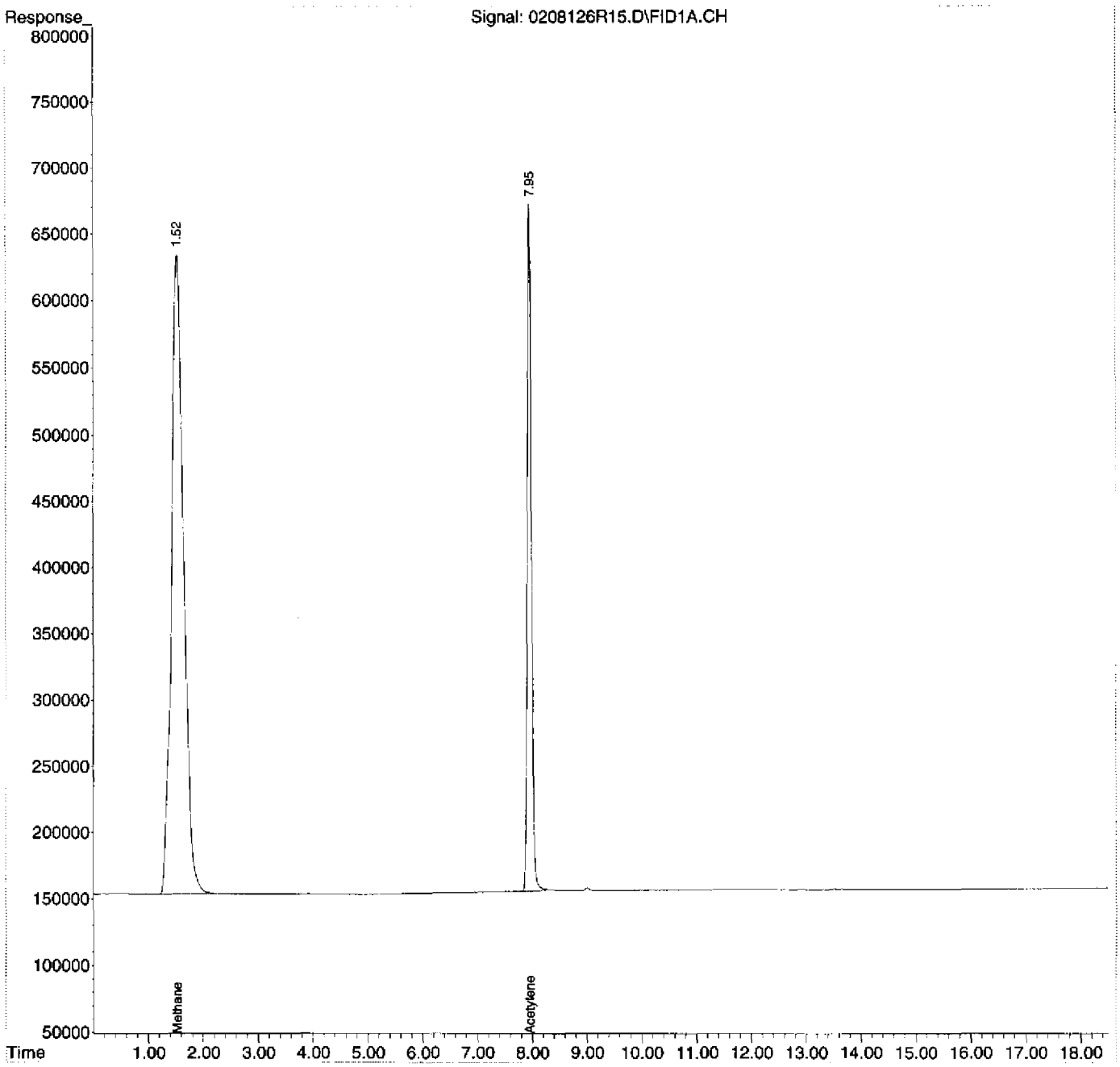
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\020812RSK\
Data File : 0208126R15.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 08 Feb 2012 11:24 pm
Operator : rh
Sample : 1202020-04
Misc : HW31-P
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Feb 09 09:04:17 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm



Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\020812RSK\
Data File : 0208126R16.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 08 Feb 2012 11:51 pm
Operator : rh
Sample : 1202020-05
Misc : HW31Z
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Feb 09 09:04:25 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) S Acetylene	7.955	26623721	76.173 ug/L
Spiked Amount 66.330 Range 66 - 153		Recovery = 114.84%	
Target Compounds			
1) TM Methane	1.485	10859012469	10666.701 ug/L -0.C.
3) TM Ethene	0.000	0	N.D. ug/L
4) TM Ethane	9.003	7291779	7.544 ug/L
5) Qual Propane	0.000	0	N.D.
6) Qual Butane	0.000	0	N.D.

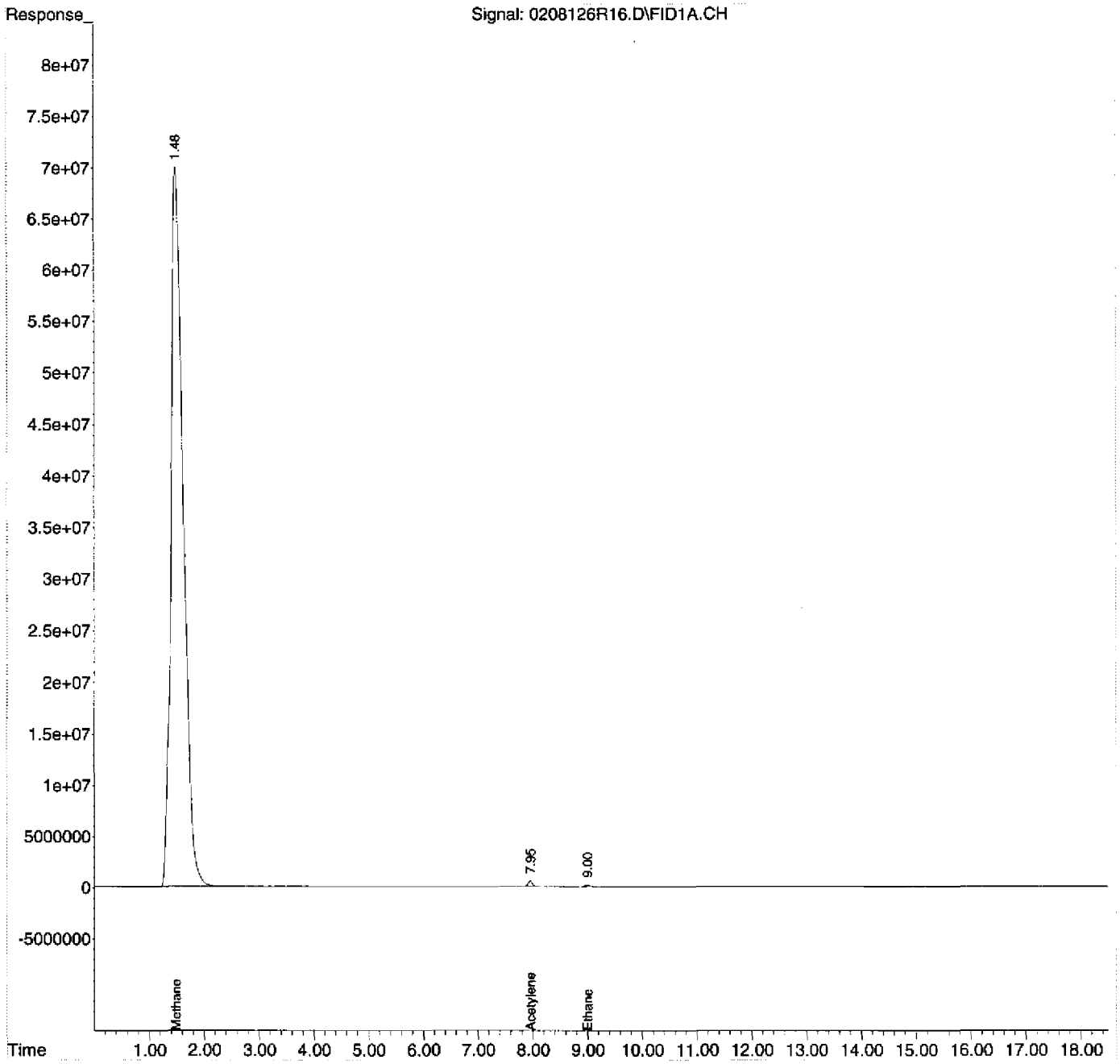
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\020812RSK\
Data File : 0208126R16.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 08 Feb 2012 11:51 pm
Operator : rh
Sample : 1202020-05
Misc : HW31Z
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Feb 09 09:04:25 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm



Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\020812RSK\
Data File : 0208126R17.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 09 Feb 2012 12:25 am
Operator : rh
Sample : 1202020-08
Misc : HW30
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Feb 09 09:04:33 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) S Acetylene	7.955	26862359	76.856 ug/L
Spiked Amount 66.330	Range 66 - 153	Recovery =	115.87%
Target Compounds			
1) TM Methane	1.524	124101868	121.904 ug/L
3) TM Ethene	0.000	0	N.D. ug/L
4) TM Ethane	0.000	0	N.D. ug/L
5) Qual Propane	0.000	0	N.D.
6) Qual Butane	0.000	0	N.D.

(f)=RT Delta > 1/2 Window (m)=manual int.

00079

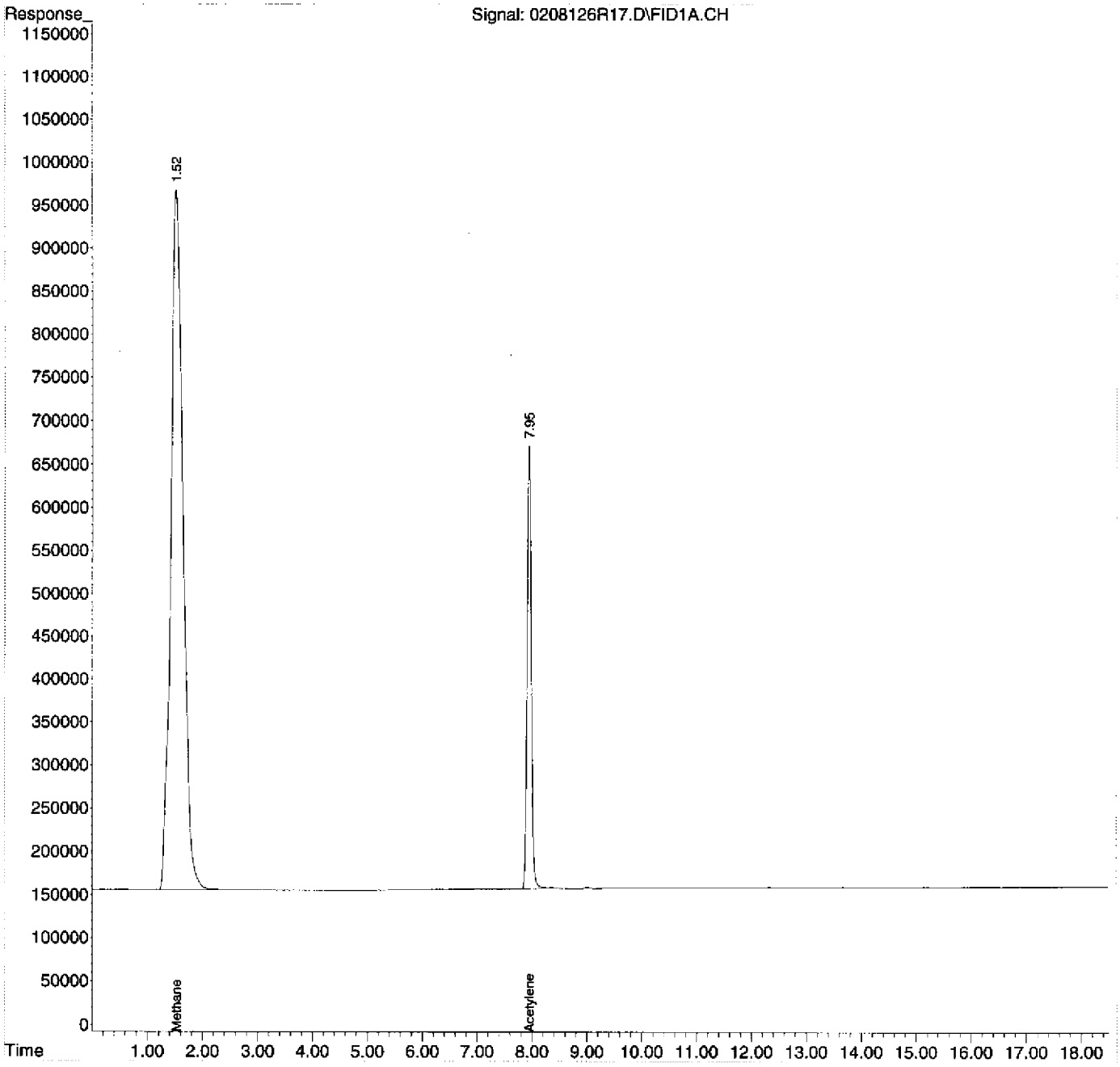
DIM0279368 DIM0279469

Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\020812RSK\
Data File : 0208126R17.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 09 Feb 2012 12:25 am
Operator : rh
Sample : 1202020-08
Misc : HW30
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Feb 09 09:04:33 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm



DIM0279368 DIM0279470

Quantitation Report (Not Reviewed) 01585

Data Path : D:\MSDCHEM\1\2012\DATA\020812RSK\
Data File : 0208126R18.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 09 Feb 2012 12:51 am
Operator : rh
Sample : 1202020-09
Misc : HW30-P
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Feb 09 09:04:41 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) S Acetylene	7.955	26502370	75.826 ug/L
Spiked Amount 66.330 Range 66 - 153		Recovery =	114.32%
Target Compounds			
1) TM Methane	1.523	93166422	91.516 ug/L
3) TM Ethene	0.000	0	N.D. ug/L
4) TM Ethane	0.000	0	N.D. ug/L
5) Qual Propane	0.000	0	N.D.
6) Qual Butane	0.000	0	N.D.

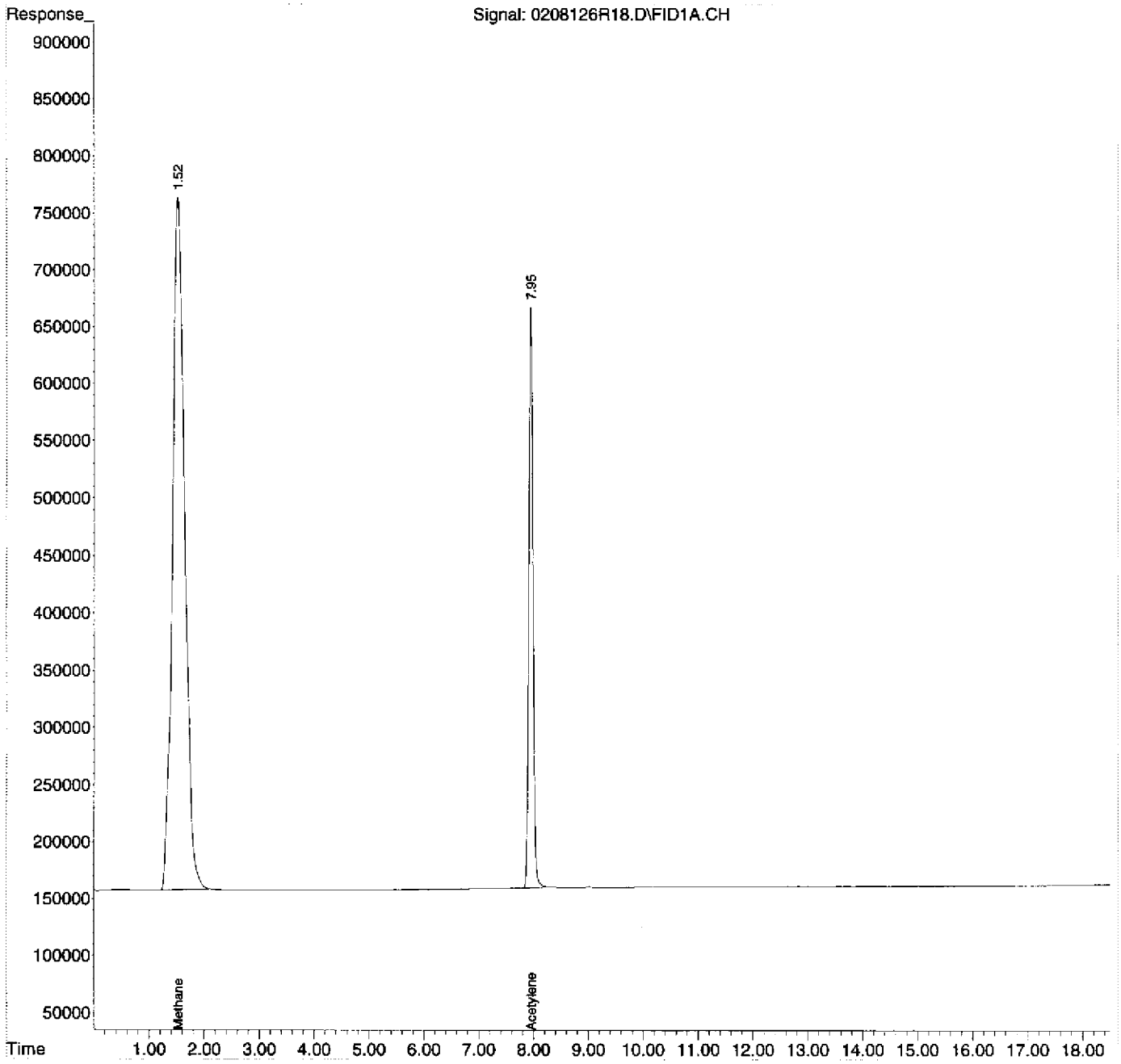
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\020812RSK\
Data File : 0208126R18.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 09 Feb 2012 12:51 am
Operator : rh
Sample : 1202020-09
Misc : HW30-P
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Feb 09 09:04:41 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm



Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\020812RSK\
Data File : 0208126R19.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 09 Feb 2012 1:18 am
Operator : rh
Sample : 1202020-11
Misc : HW15A
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Feb 09 09:04:49 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) S Acetylene	7.956	25966324	74.292 ug/L
Spiked Amount 66.330 Range 66 - 153		Recovery = 112.00%	
Target Compounds			
1) TM Methane	1.495	7871843679	7732.434 ug/L -o,c,
3) TM Ethene	0.000	0	N.D. ug/L
4) TM Ethane	9.003	123026612	127.282 ug/L
5) Qual Propane	12.905	2098627	NoCal
6) Qual Butane	0.000	0	N.D.

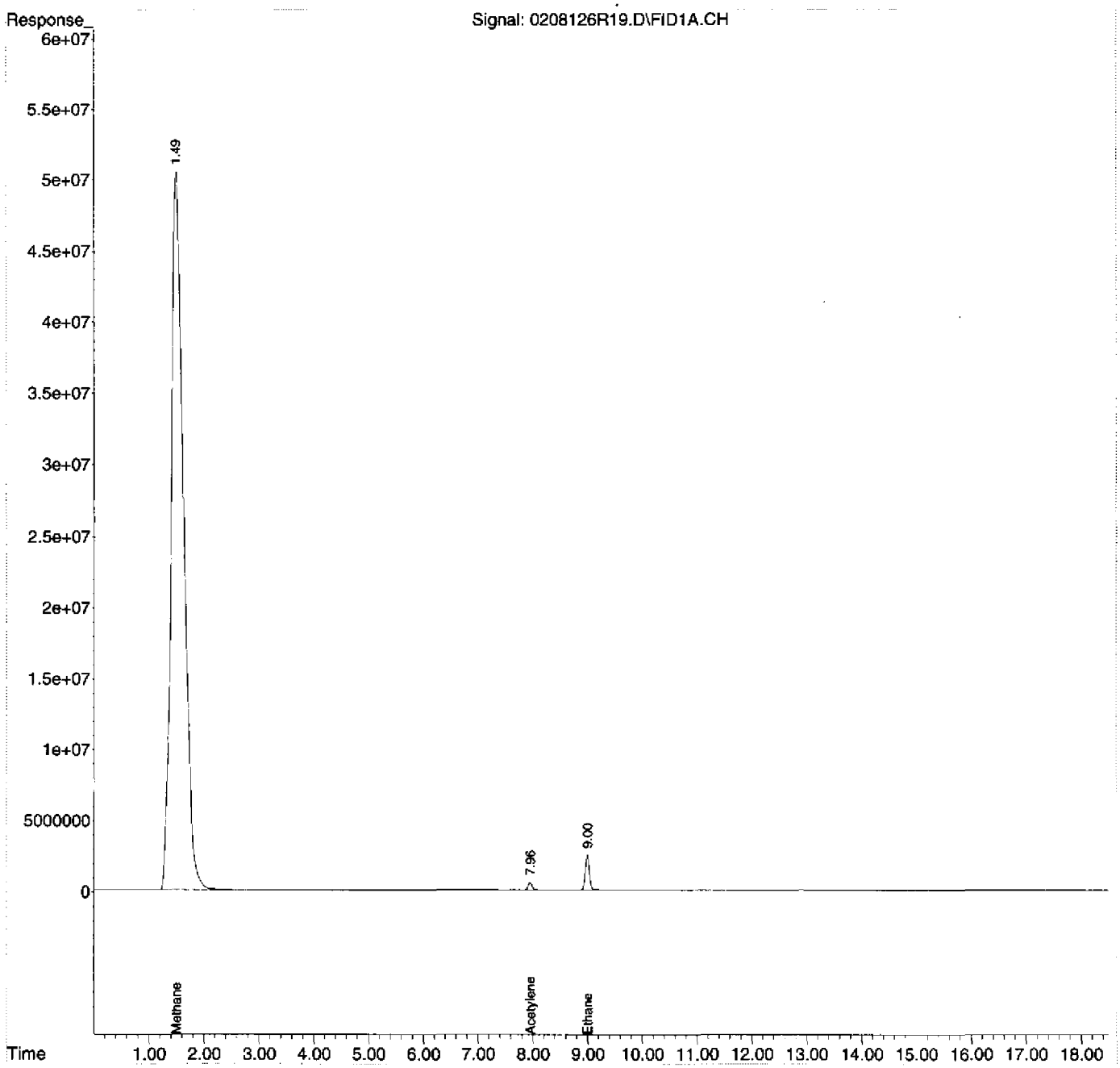
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\020812RSK\
Data File : 0208126R19.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 09 Feb 2012 1:18 am
Operator : rh
Sample : 1202020-11
Misc : HW15A
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Feb 09 09:04:49 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm



00084

Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\020812RSK\
Data File : 0208126R20.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 09 Feb 2012 1:53 am
Operator : rh
Sample : 1202020-12
Misc : HW15A-P
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Feb 09 09:05:03 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) S Acetylene	7.956	25794426	73.800 ug/L
Spiked Amount 66.330 Range 66 - 153		Recovery =	111.26%
Target Compounds			
1) TM Methane	1.524	27908440	27.414 ug/L
3) TM Ethene	0.000	0	N.D. ug/L
4) TM Ethane	9.008	232325	<MDL ug/L
5) Qual Propane	0.000	0	N.D.
6) Qual Butane	0.000	0	N.D.

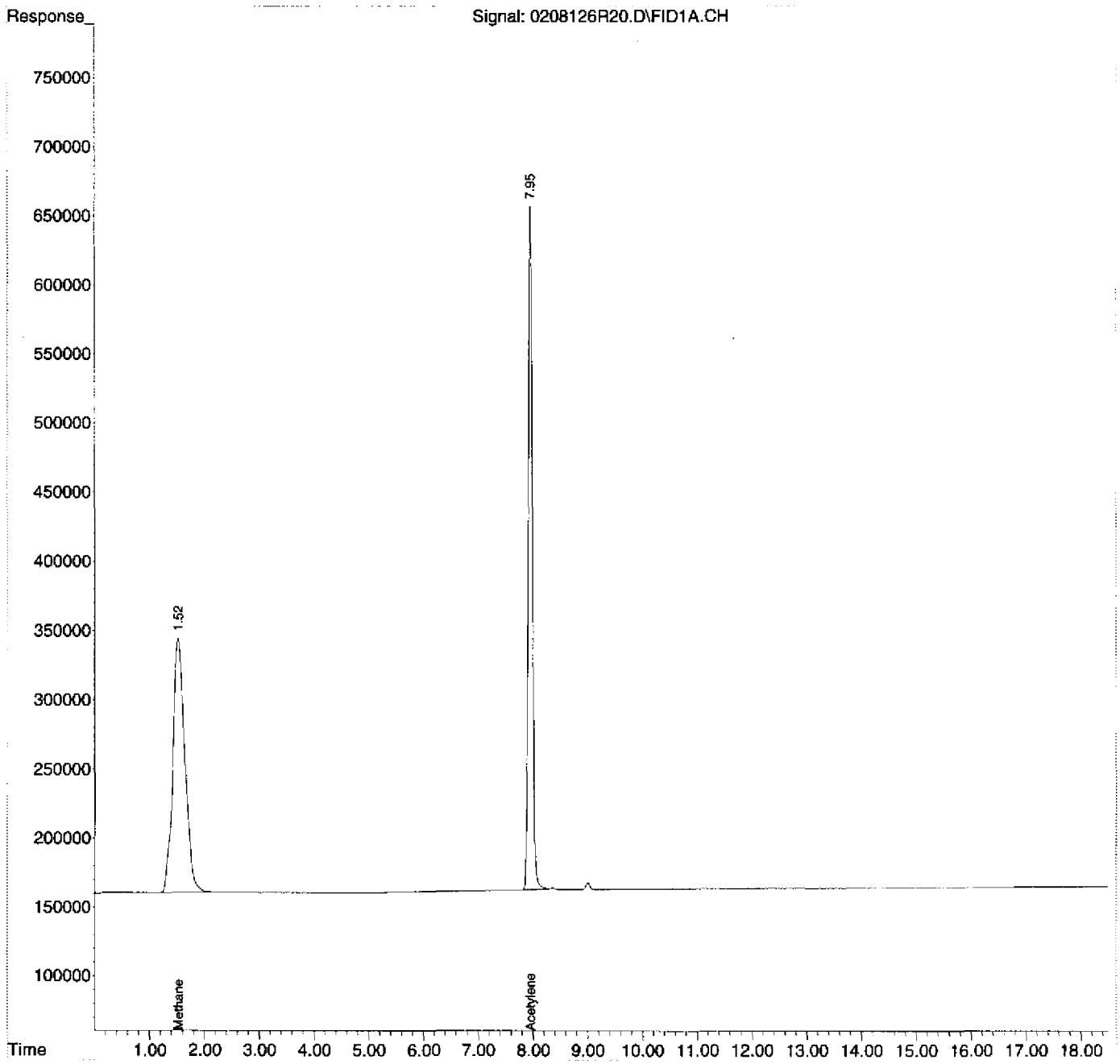
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\020812RSK\
Data File : 0208126R20.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 09 Feb 2012 1:53 am
Operator : rh
Sample : 1202020-12
Misc : HW15A-P
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Feb 09 09:05:03 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm



Quantitation Report (Not Reviewed) 01591

Data Path : D:\MSDCHEM\1\2012\DATA\020812RSK\
Data File : 0208126R21.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 09 Feb 2012 2:19 am
Operator : rh
Sample : 2020026-IBL1
Misc : IB
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Feb 09 09:05:12 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) S Acetylene	7.958	27228412	77.903 ug/L
Spiked Amount 66.330 Range 66 - 153		Recovery = 117.45%	
Target Compounds			
1) TM Methane	1.531	1078448	1.059 ug/L
3) TM Ethene	0.000	0	N.D. ug/L
4) TM Ethane	0.000	0	N.D. ug/L
5) Qual Propane	0.000	0	N.D.
6) Qual Butane	0.000	0	N.D.

(f)=RT Delta > 1/2 Window (m)=manual int.

00687

DIM0279477

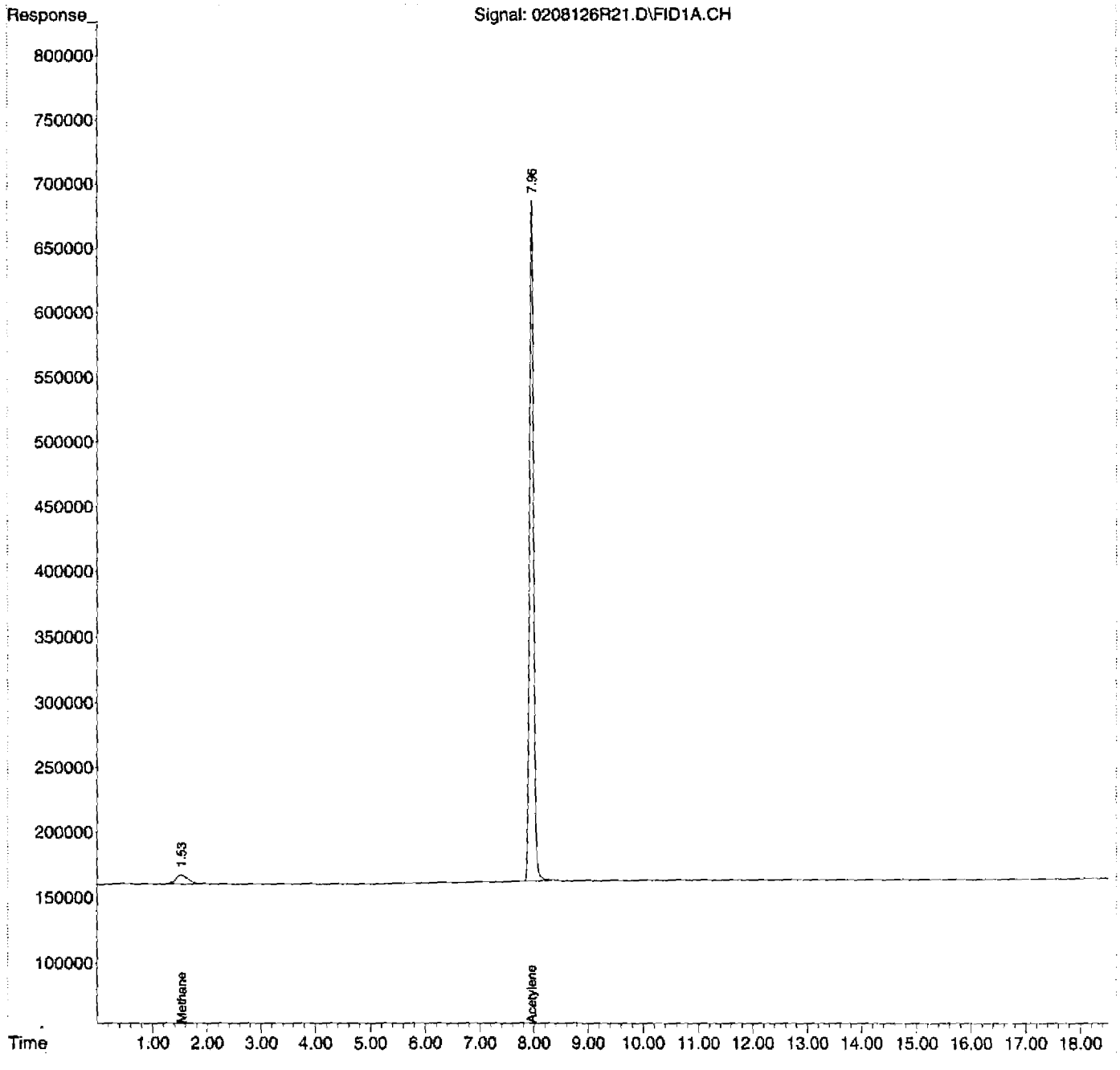
Quantitation Report (Not Reviewed)

81592

Data Path : D:\MSDCHEM\1\2012\DATA\020812RSK\
Data File : 0208126R21.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 09 Feb 2012 2:19 am
Operator : rh
Sample : 2020026-IBL1
Misc : IB
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Feb 09 09:05:12 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm



00085

DIM0279478

Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\020812RSK\
Data File : 0208126R25.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 09 Feb 2012 4:13 am
Operator : rh
Sample : 1202020-06
Misc : TB25
ALS Vial : 25 Sample Multiplier: 1

Quant Time: Feb 09 09:05:44 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) S Acetylene	7.955	26781932	76.626 ug/L
Spiked Amount 66.330	Range 66 - 153	Recovery =	115.52%
Target Compounds			
1) TM Methane	1.536	1322348	1.299 ug/L
3) TM Ethene	0.000	0	N.D. ug/L
4) TM Ethane	0.000	0	N.D. ug/L
5) Qual Propane	0.000	0	N.D.
6) Qual Butane	0.000	0	N.D.

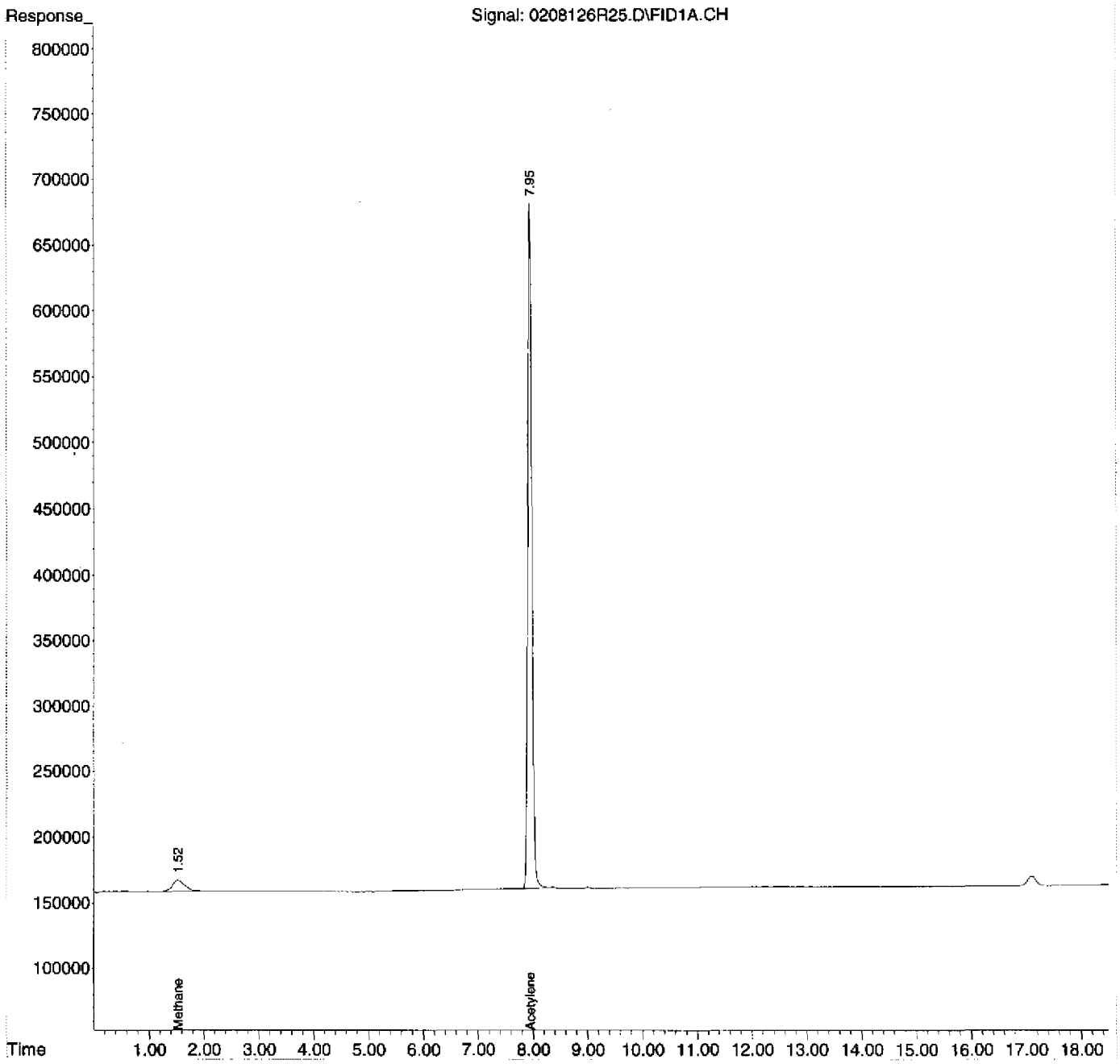
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\020812RSK\
Data File : 0208126R25.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 09 Feb 2012 4:13 am
Operator : rh
Sample : 1202020-06
Misc : TB25
ALS Vial : 25 Sample Multiplier: 1

Quant Time: Feb 09 09:05:44 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm



Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\020812RSK\
Data File : 0208126R26.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 09 Feb 2012 4:48 am
Operator : rh
Sample : 1202020-07
Misc : FB11
ALS Vial : 26 Sample Multiplier: 1

Quant Time: Feb 09 09:05:52 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) S Acetylene	7.957	26276750	75.180 ug/L
Spiked Amount 66.330 Range 66 - 153		Recovery =	113.34%
Target Compounds			
1) TM Methane	1.531	1117823	1.098 ug/L
3) TM Ethene	0.000	0	N.D. ug/L
4) TM Ethane	0.000	0	N.D. ug/L
5) Qual Propane	0.000	0	N.D.
6) Qual Butane	0.000	0	N.D.

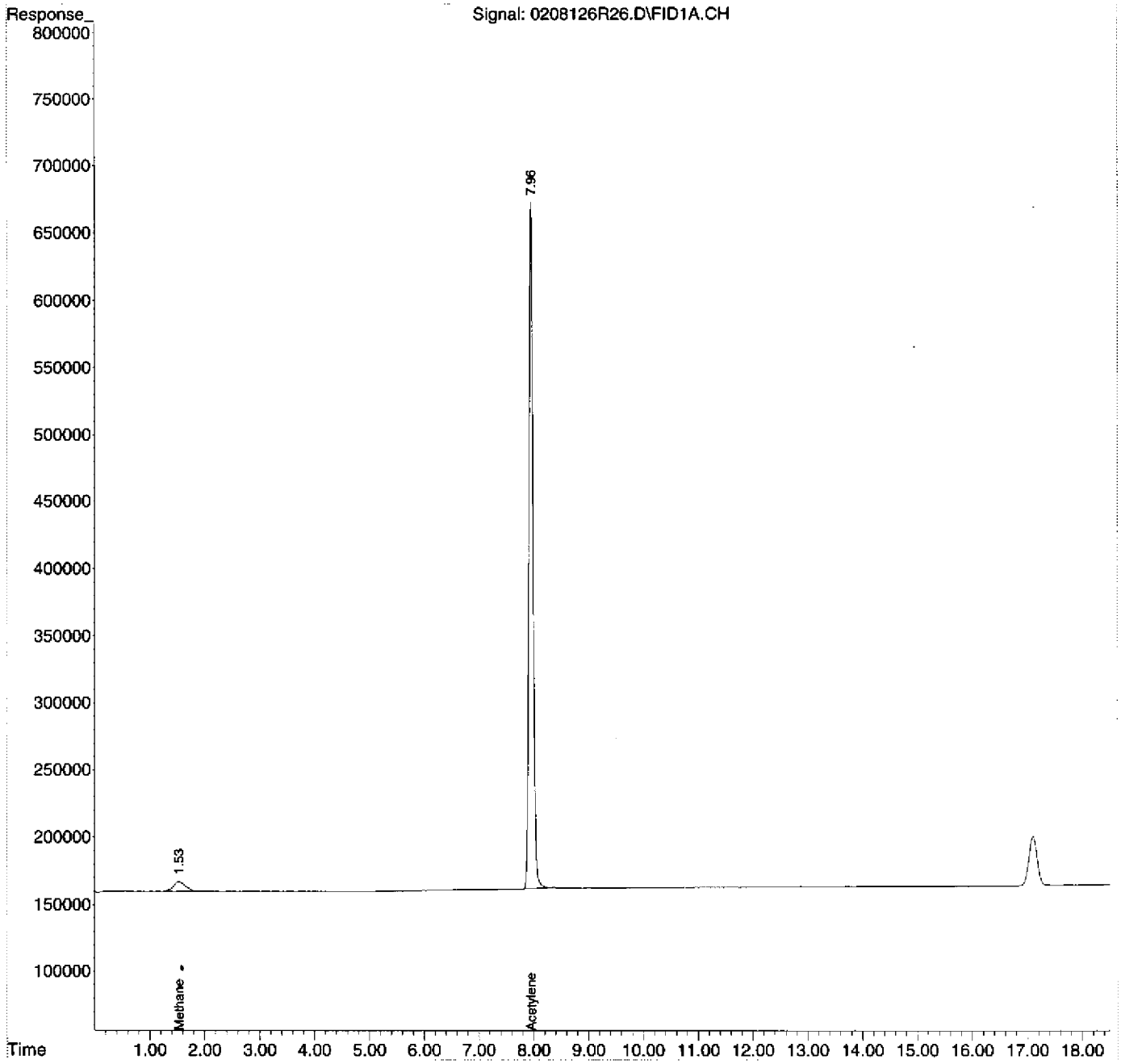
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\020812RSK\
Data File : 0208126R26.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 09 Feb 2012 4:48 am
Operator : rh
Sample : 1202020-07
Misc : FB11
ALS Vial : 26 Sample Multiplier: 1

Quant Time: Feb 09 09:05:52 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm



Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\020812RSK\
Data File : 0208126R27.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 09 Feb 2012 5:15 am
Operator : rh
Sample : 1202020-10
Misc : TB26
ALS Vial : 27 Sample Multiplier: 1

Quant Time: Feb 09 09:06:00 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) S Acetylene	7.957	26350060	75.390 ug/L
Spiked Amount 66.330 Range 66 - 153	Recovery = 113.66%		
Target Compounds			
1) TM Methane	1.528	1056827	1.038 ug/L
3) TM Ethene	0.000	0	N.D. ug/L
4) TM Ethane	9.348f	110298	<MDL ug/L
5) Qual Propane	0.000	0	N.D.
6) Qual Butane	0.000	0	N.D.

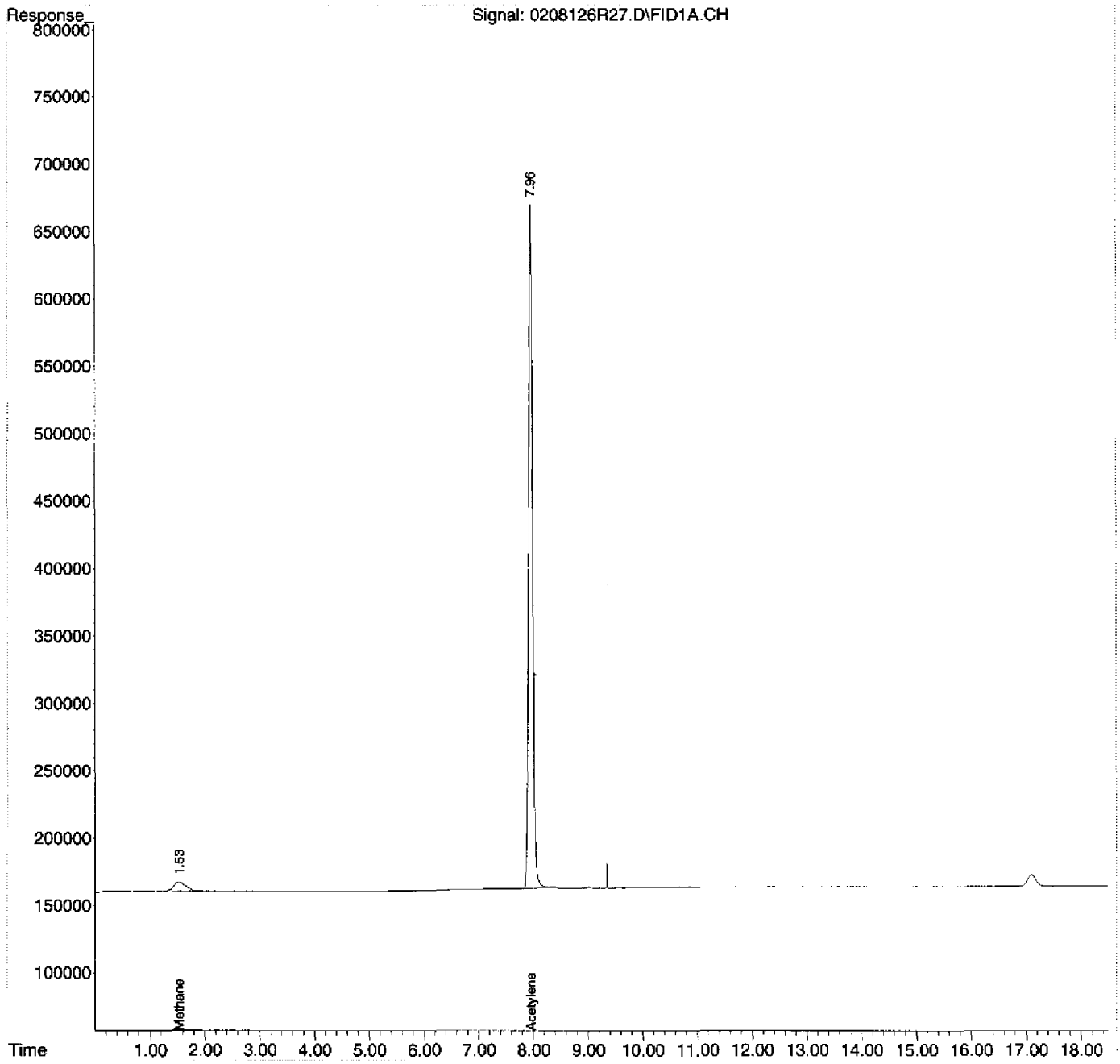
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\020812RSK\
Data File : 0208126R27.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 09 Feb 2012 5:15 am
Operator : rh
Sample : 1202020-10
Misc : TB26
ALS Vial : 27 Sample Multiplier: 1

Quant Time: Feb 09 09:06:00 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm



Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\020812RSK\
Data File : 0208126R28.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 09 Feb 2012 5:41 am
Operator : rh
Sample : 1202020-13
Misc : TB28
ALS Vial : 28 Sample Multiplier: 1

Quant Time: Feb 09 09:06:08 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) S Acetylene	7.958	26809128	76.704 ug/L
Spiked Amount 66.330	Range 66 - 153	Recovery =	115.64%
Target Compounds			
1) TM Methane	1.528	1166651	1.146 ug/L
3) TM Ethene	0.000	0	N.D. ug/L
4) TM Ethane	0.000	0	N.D. ug/L
5) Qual Propane	0.000	0	N.D.
6) Qual Butane	0.000	0	N.D.

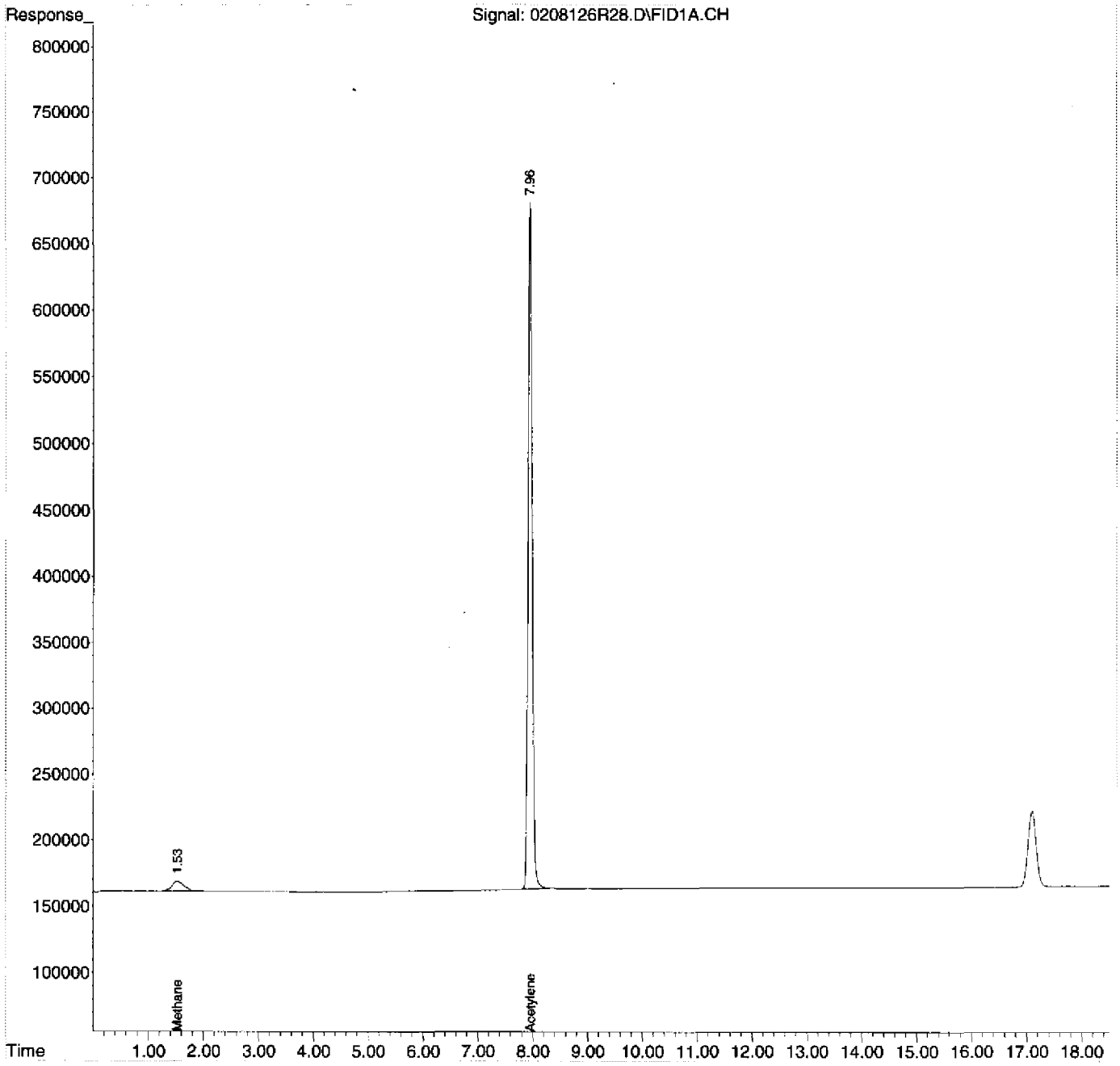
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\020812RSK\
Data File : 0208126R28.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 09 Feb 2012 5:41 am
Operator : rh
Sample : 1202020-13
Misc : TB28
ALS Vial : 28 Sample Multiplier: 1

Quant Time: Feb 09 09:06:08 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm



01681

Evaluate Continuing Calibration Report

Data Path : D:\MSDCHEM\1\2012\DATA\020812RSK\
Data File : 0208126R29.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 09 Feb 2012 6:16 am
Operator : rh
Sample : 2020026-CCV2
Misc : 2B08005
ALS Vial : 29 Sample Multiplier: 1

Quant Time: Feb 09 09:06:16 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
1 TM	Methane	1.018	1.158 E6	-13.8	115	0.00
2 S	Acetylene	349.516	396.155 E3	-13.3	107	-0.02
3 TM	Ethene	887.936	1034.912 E3	-16.6	114	0.00
4 TM	Ethane	966.567	1130.648 E3	-17.0	115	0.00

Evaluate Continuing Calibration Report - Not Founds

5	QualPropane	0.000	0.000	0.0	0#	-12.89#
6	QualButane	0.000	0.000	0.0	0#	-17.72#

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (Not Reviewed) 01682

Data Path : D:\MSDCHEM\1\2012\DATA\020812RSK\
Data File : 0208126R29.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 09 Feb 2012 6:16 am
Operator : rh
Sample : 2020026-CCV2
Misc : 2B08005
ALS Vial : 29 Sample Multiplier: 1

Quant Time: Feb 09 09:06:16 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) S Acetylene	7.961	8576752	24.539 ug/L
Spiked Amount 66.330 Range 66 - 153		Recovery =	37.00%#
Target Compounds			
1) TM Methane	1.525	15323973	15.053 ug/L
3) TM Ethene	8.368	24273866	27.337 ug/L
4) TM Ethane	9.006	28244727	29.222 ug/L
5) Qual Propane	0.000	0	N.D.
6) Qual Butane	0.000	0	N.D.

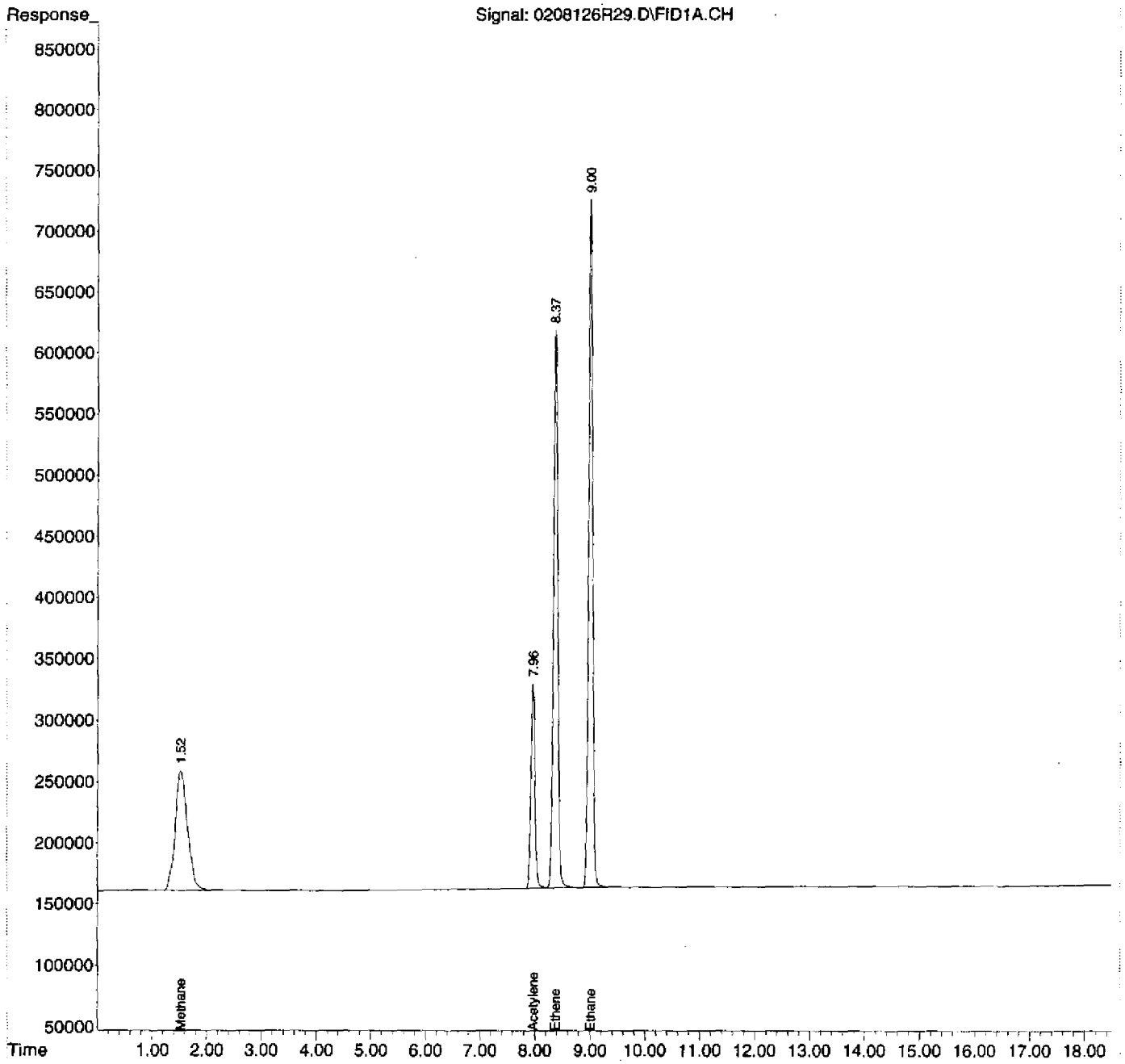
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\020812RSK\
Data File : 0208126R29.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 09 Feb 2012 6:16 am
Operator : rh
Sample : 2020026-CCV2
Misc : 2B08005
ALS Vial : 29 Sample Multiplier: 1

Quant Time: Feb 09 09:06:16 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm



81604

SDG: 12079A

Instrument: AG6890N-6

Analysis Date: 2/9/12

SAMPLE DATA

G:\USER\ESAT\1 Organic Group\Forms\DataPackageSeparators.doc

00099

01685

Injection Log

Operator: rh
Directory: D:\MSDCHEM\1\2012\DATA\020912RSK\

Vial	File Name	Mult	Sample Info	Misc Info	Date Acquired
1	0209126R01.D	0	2020032-CCV1	2B09005	09 Feb 2012 10:59 am
2	0209126R02.D	0	2020032-LCV1	2B09003	09 Feb 2012 11:25 am
3	0209126R03.D	0	2020032-LCV2	2B09004	09 Feb 2012 11:51 am
4	0209126R04.D	0	B2B0041-BLK1	MB	09 Feb 2012 12:18 pm
5	0209126R05.D	0	B2B0041-BS1	LCS	09 Feb 2012 12:53 pm
6	0209126R06.D	0	1202020-03RE1	HW31 0.15 ML	09 Feb 2012 1:19 pm
7	0209126R07.D	0	1202020-05RE1	HW31Z 0.15 ML	09 Feb 2012 1:46 pm
8	0209126R08.D	0	1202020-11RE1	HW15A 0.2 ML	09 Feb 2012 2:21 pm
9	0209126R09.D	0	1202020-12RE1	HW15AP 16.1ML	09 Feb 2012 2:48 pm
10	0209126R10.D	0	1202013-09RE1	HW39P 16.1ML	09 Feb 2012 3:22 pm
11	0209126R11.D	0	1202023-01	FB12 16.1ML	09 Feb 2012 4:59 pm
12	0209126R12.D	0	1202023-04	TB27 16.1ML	09 Feb 2012 5:25 pm
13	0209126R13.D	0	1202023-07	TB29 16.1ML	09 Feb 2012 6:00 pm
14	0209126R14.D	0	1202023-08	FB13 16.1ML	09 Feb 2012 6:26 pm
15	0209126R15.D	0	1202023-11	TB30 16.1ML	09 Feb 2012 7:01 pm
16	0209126R16.D	0	2020032-IBL1	IB	09 Feb 2012 7:27 pm
17	0209126R17.D	0	1202023-02	HW51 16.1ML	09 Feb 2012 8:02 pm
18	0209126R18.D	0	1202023-03	HW51-P 16.1ML	09 Feb 2012 8:28 pm
19	0209126R19.D	0	1202023-05	HW47 16.1ML	09 Feb 2012 8:55 pm
20	0209126R20.D	0	1202023-06	HW47-P 16.1ML	09 Feb 2012 9:30 pm
21	0209126R21.D	0	1202023-09	HW38 16.1ML	09 Feb 2012 9:56 pm
22	0209126R22.D	0	1202023-10	HW38-P 16.1ML	09 Feb 2012 10:23 pm
23	0209126R23.D	0	2020032-CCV2	2B09005	09 Feb 2012 10:58 pm
24	0209126R24.D	0	2020032-CCV3	2B09005	09 Feb 2012 11:24 pm
25	0209126R25.D	0	regular ib	2B09005	09 Feb 2012 11:50 pm
26	0209126R26.D	0	ib no surrogate	2B09005	10 Feb 2012 12:25 am
27	0209126R27.D	0	empty He vial	2B09005	10 Feb 2012 12:51 am

00100

Response Factor Report AG6890N-6

Method Path : D:\MSDCHEM\1\2012\METHOD\
Method File : 0126126RSK.M
Title :
Last Update : Fri Jan 27 11:26:56 2012
Response Via : Initial Calibration

Calibration Files
1 =0126126R008.D 2 =0126126R007.D 3 =0126126R006.D
4 =0126126R005.D 5 =0126126R004.D 6 =0126126R003.D

	Compound	1	2	3	4	5	6	Avg		%RSD
1) TM	Methane		1.100	1.004	1.003	0.997	1.028	1.018	E6	4.25
2) S	Acetylene	3.221	3.304	3.380	3.710	3.595	3.697	3.495	E5	5.56
3) TM	Ethene	8.210	8.669	8.696	9.069	9.135	9.418	8.879	E5	4.42
4) TM	Ethane	0.894	0.941	0.956	0.986	0.994	1.023	0.967	E6	4.30
5) Qual	Propane							0.000		-1.00
6) Qual	Butane							0.000		-1.00

(#) = Out of Range ### Number of calibration levels exceeded format ###

GC QA-QC Check Report

01687

Daily Calibration File : D:\MSDCHEM\1\DATA\2010\120810RSK\120810A02.D
Time Acquired : 08 Dec 2010 11:12 am

File	Sample	Surrogate Recovery %
0209126R01.D	2020032-CCV1	35*
0209126R02.D	2020032-LCV1	1*
0209126R03.D	2020032-LCV2	3*
0209126R04.D	B2B0041-BLK1	111
0209126R05.D	B2B0041-BS1	115
0209126R06.D	1202020-03RE1	116
0209126R07.D	1202020-05RE1	111
0209126R08.D	1202020-11RE1	119
0209126R09.D	1202020-12RE1	109
0209126R10.D	1202013-09RE1	89
0209126R11.D	1202023-01	114
0209126R12.D	1202023-04	121
0209126R13.D	1202023-07	113
0209126R14.D	1202023-08	113
0209126R15.D	1202023-11	115
0209126R16.D	2020032-IBL1	113
0209126R17.D	1202023-02	110
0209126R18.D	1202023-03	112
0209126R19.D	1202023-05	108
0209126R20.D	1202023-06	106
0209126R21.D	1202023-09	114
0209126R22.D	1202023-10	113
0209126R23.D	2020032-CCV2	34*
0209126R24.D	2020032-CCV3	34*
0209126R25.D	regular ib	104

(fails) - fails 24hr time check * - fails criteria

Created: Fri Feb 10 08:45:54 2012 AG6890N-6

00102

Evaluate Continuing Calibration Report

Data Path : D:\MSDCHEM\1\2012\DATA\020912RSK\
Data File : 0209126R01.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 09 Feb 2012 10:59 am
Operator : rh
Sample : 2020032-CCV1
Misc : 2B09005
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Feb 09 12:39:17 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
1 TM	Methane	1.018	1.079 E6	-6.0	108	0.00
2 S	Acetylene	349.516	370.277 E3	-5.9	100	-0.03
3 TM	Ethene	887.936	969.332 E3	-9.2	107	0.00
4 TM	Ethane	966.567	1062.563 E3	-9.9	108	0.00

Evaluate Continuing Calibration Report - Not Founds

5	QualPropane	0.000	0.000	0.0	0#	-12.89#
6	QualButane	0.000	0.000	0.0	0#	-17.72#

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\020912RSK\
Data File : 0209126R01.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 09 Feb 2012 10:59 am
Operator : rh
Sample : 2020032-CCV1
Misc : 2B09005
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Feb 09 12:39:17 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) S Acetylene	7.948	8016495	22.936 ug/L
Spiked Amount 66.330 Range 66 - 153		Recovery =	34.58%#
Target Compounds			
1) TM Methane	1.525	14277800	14.025 ug/L
3) TM Ethene	8.366	22735682	25.605 ug/L
4) TM Ethane	9.006	26543893	27.462 ug/L
5) Qual Propane	0.000	0	N.D.
6) Qual Butane	0.000	0	N.D.

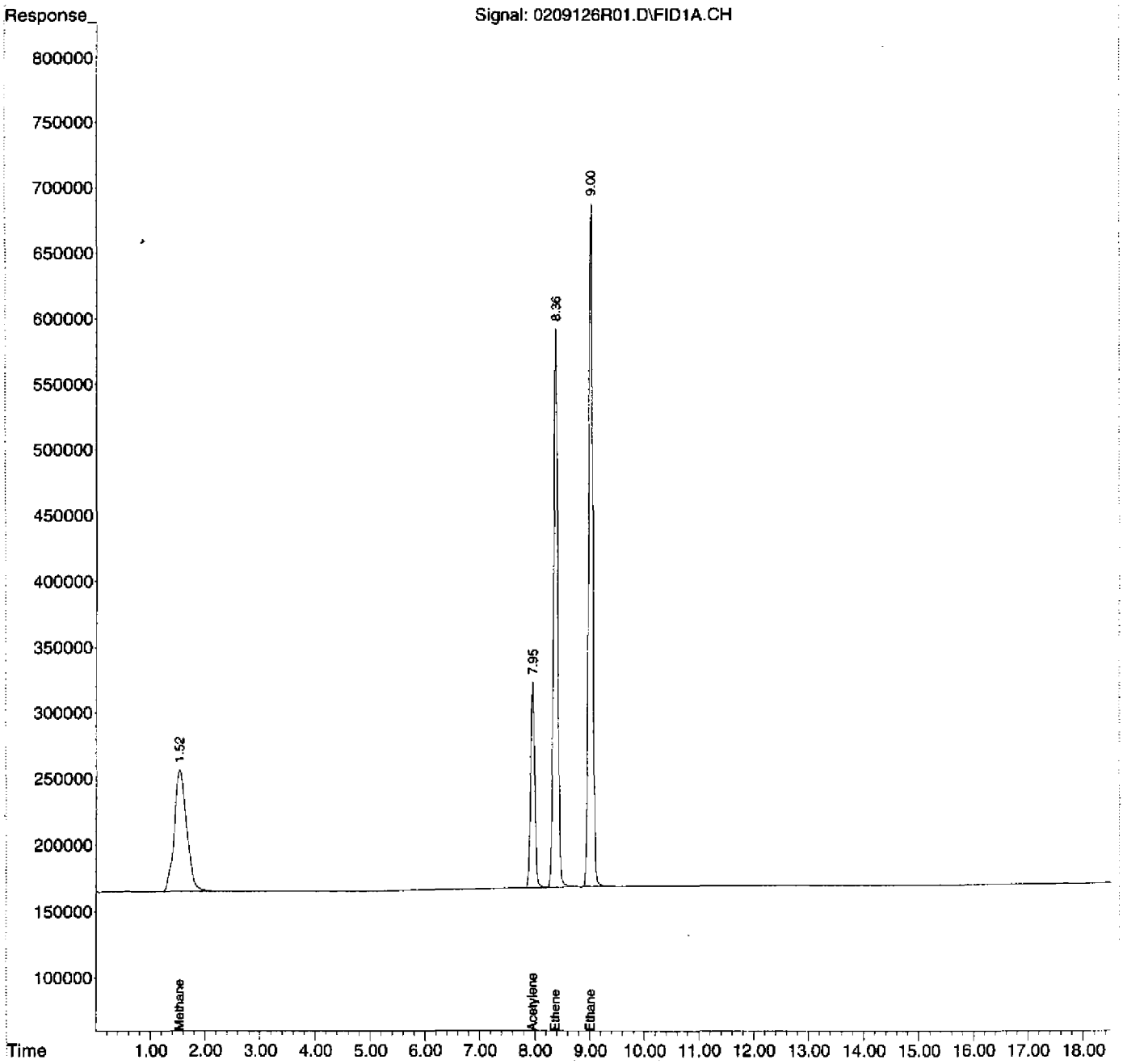
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\020912RSK\
Data File : 0209126R01.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 09 Feb 2012 10:59 am
Operator : rh
Sample : 2020032-CCV1
Misc : 2B09005
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Feb 09 12:39:17 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm



RSK-175 HC LCV REPORT

Instrument Name: AG6890N-6
File Name LCV1: 0209126R02
File Name LCV2: 0209126R03
Date Acquired: 02/09/12
Operator: rh

Analyte	Spike ug/L	Calculated ug/L	QC Limits	%R	Status
Methane	1.231	1.382	60 - 140	112.3%	pass
Acetylene	2.014	1.732	60 - 140	86.0%	NA
Ethene	1.091	1.03	60 - 140	94.4%	pass
Ethane	1.162	1.077	60 - 140	92.7%	pass

Ethene & ethane recovery calculated from LCV1 results
Methane recovery calculated from LCV2 results

Q1612

Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\020912RSK\
Data File : 0209126R02.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 09 Feb 2012 11:25 am
Operator : rh
Sample : 2020032-LCV1
Misc : 2B09003
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Feb 09 12:39:25 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) S Acetylene	7.964	311472	0.891 ug/L
Spiked Amount 66.330 Range 66 - 153		Recovery =	1.34%#
Target Compounds			
1) TM Methane	1.534	990251	0.973 ug/L
3) TM Ethene	8.370	914871	1.030 ug/L
4) TM Ethane	9.009	1040726	1.077 ug/L
5) Qual Propane	0.000	0	N.D.
6) Qual Butane	0.000	0	N.D.

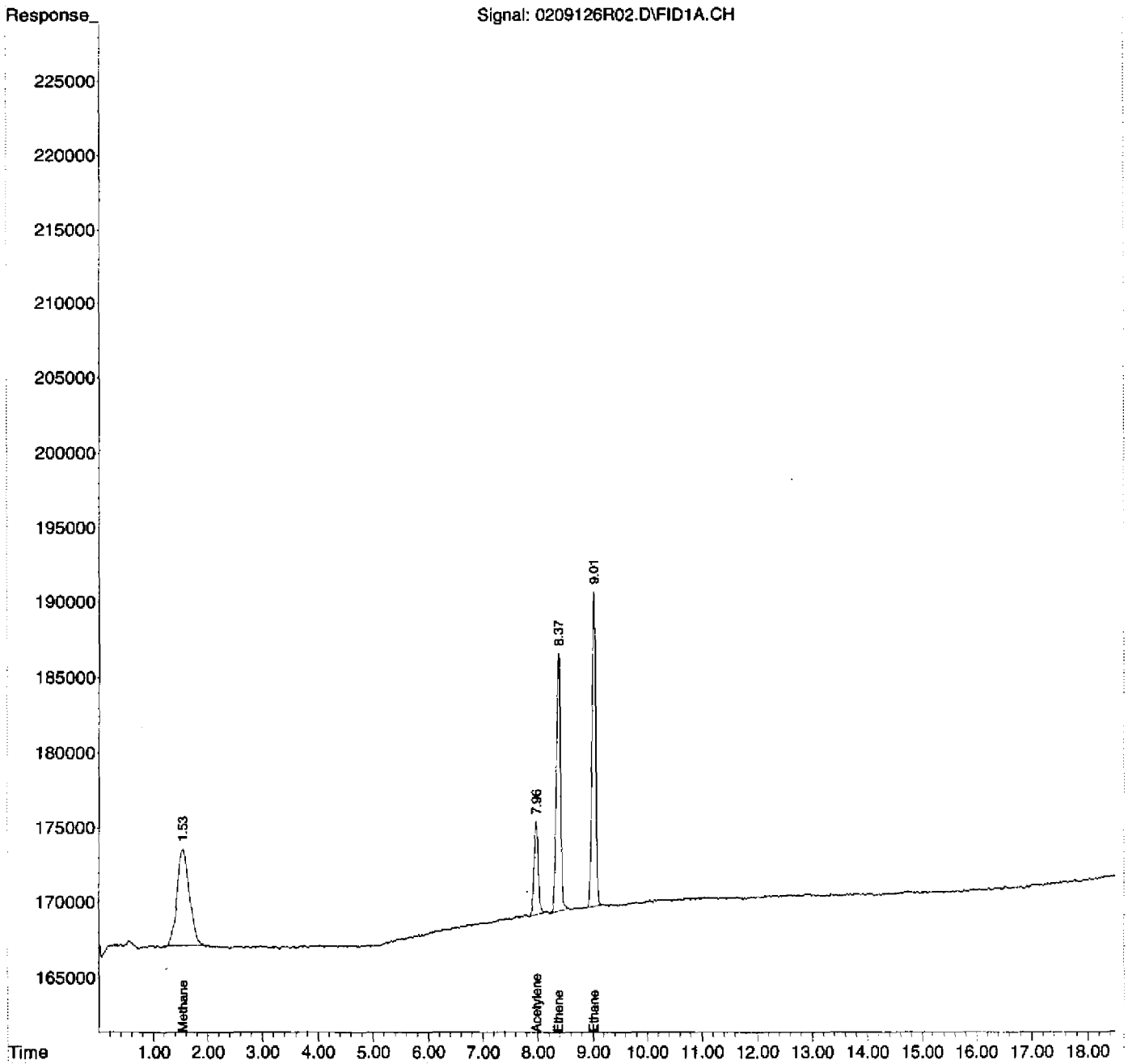
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\020912RSK\
Data File : 0209126R02.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 09 Feb 2012 11:25 am
Operator : rh
Sample : 2020032-LCV1
Misc : 2B09003
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Feb 09 12:39:25 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm



Q1614

Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\020912RSK\
Data File : 0209126R03.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 09 Feb 2012 11:51 am
Operator : rh
Sample : 2020032-LCV2
Misc : 2B09004
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Feb 09 12:39:33 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) S Acetylene	7.965	605533	1.732 ug/L
Spiked Amount 66.330 Range 66 - 153		Recovery =	2.61%#
Target Compounds			
1) TM Methane	1.536	1407158	1.382 ug/L
3) TM Ethene	8.370	1756369	1.978 ug/L
4) TM Ethane	9.008	2074137	2.146 ug/L
5) Qual Propane	0.000	0	N.D.
6) Qual Butane	0.000	0	N.D.

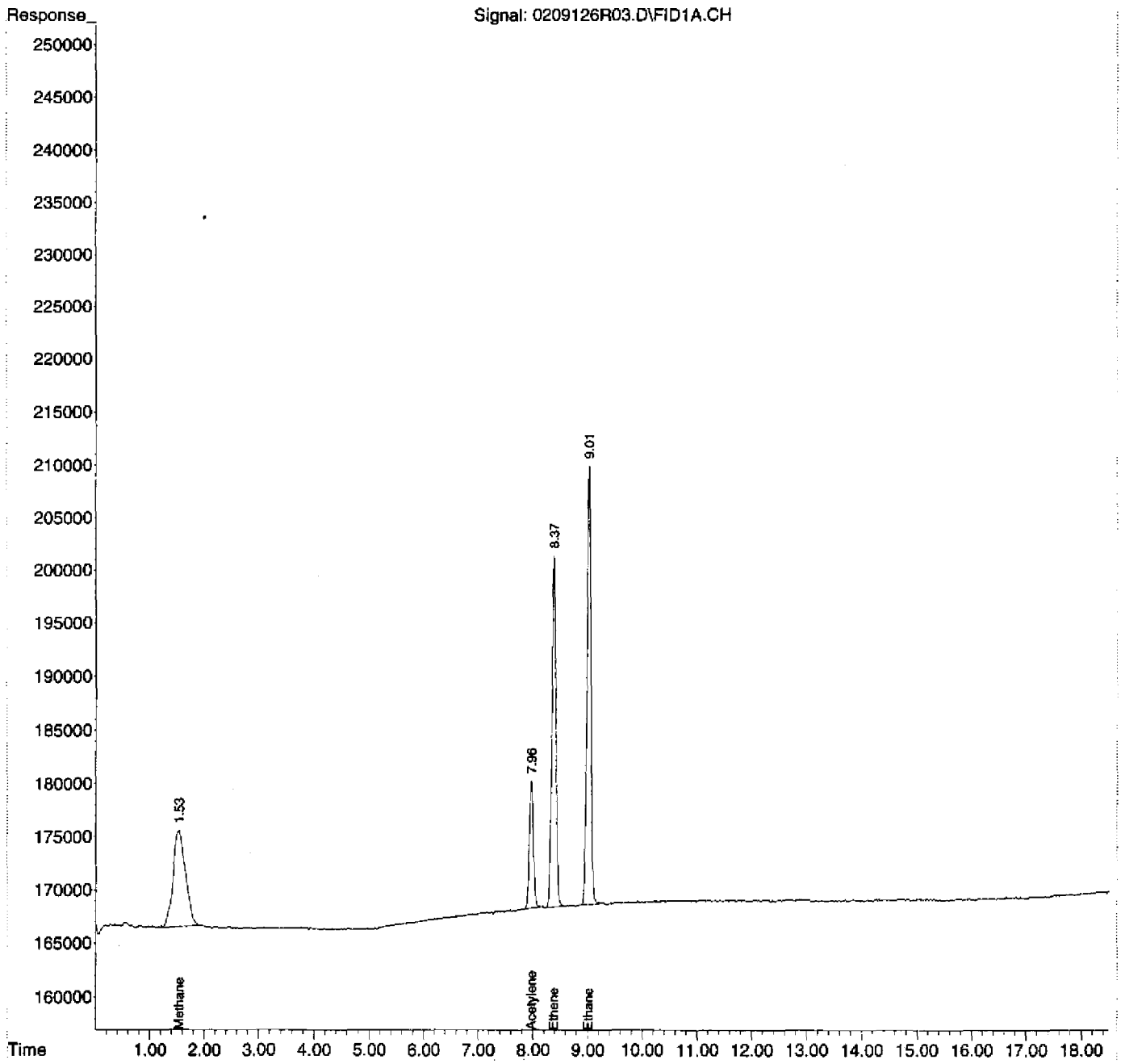
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\020912RSK\
Data File : 0209126R03.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 09 Feb 2012 11:51 am
Operator : rh
Sample : 2020032-LCV2
Misc : 2B09004
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Feb 09 12:39:33 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm



00110

Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\020912RSK\
Data File : 0209126R04.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 09 Feb 2012 12:18 pm
Operator : rh
Sample : B2B0041-BLK1
Misc : MB
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Feb 09 12:38:54 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) S Acetylene	7.958	25680866	73.476 ug/L
Spiked Amount 66.330	Range 66 - 153	Recovery =	110.77%
Target Compounds			
1) TM Methane	1.538	741871	0.729 ug/L
3) TM Ethene	0.000	0	N.D. ug/L
4) TM Ethane	0.000	0	N.D. ug/L
5) Qual Propane	0.000	0	N.D.
6) Qual Butane	0.000	0	N.D.

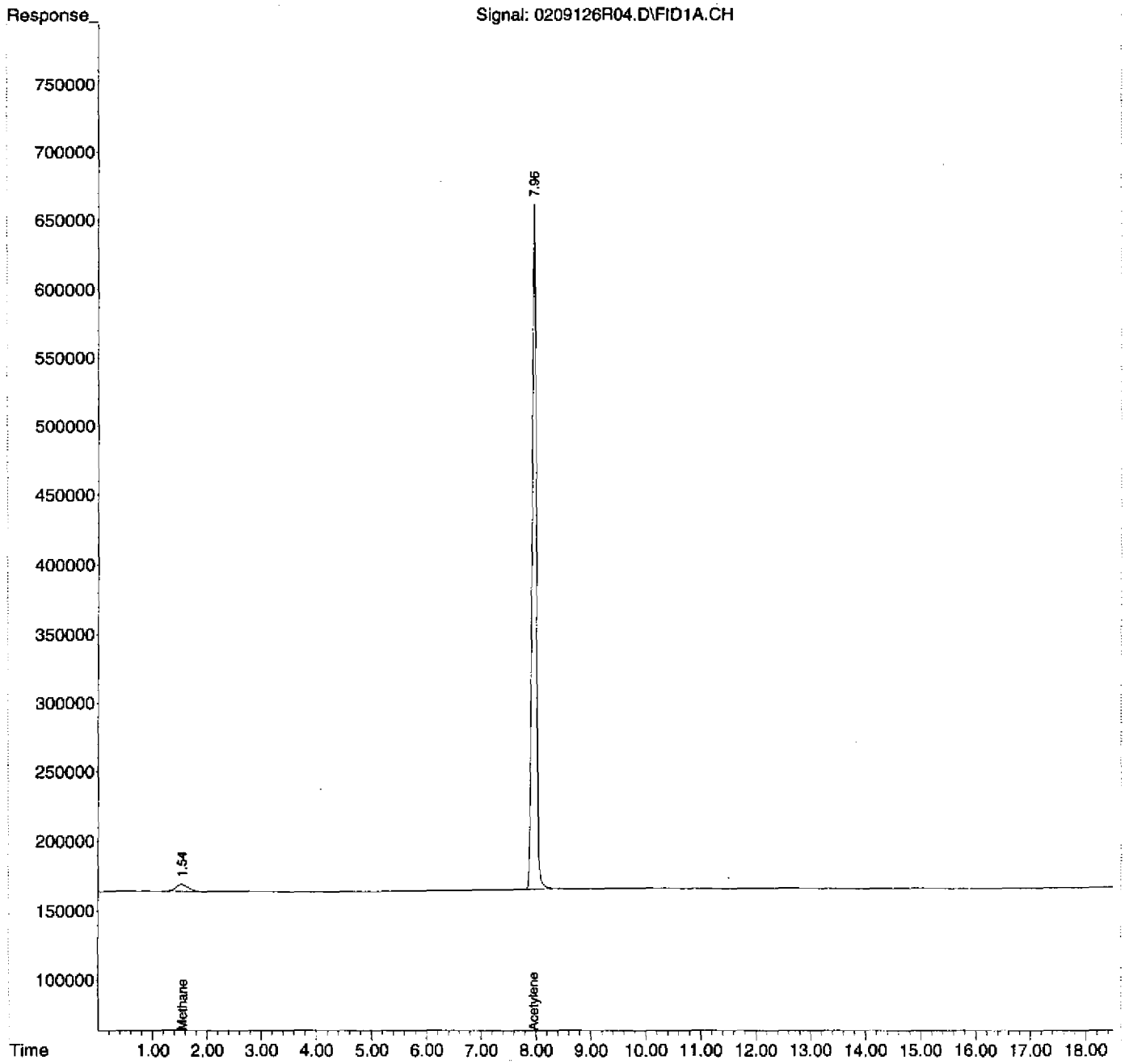
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\020912RSK\
Data File : 0209126R04.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 09 Feb 2012 12:18 pm
Operator : rh
Sample : B2B0041-BLK1
Misc : MB
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Feb 09 12:38:54 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm



RSK-175 LCSSUMMARY REPORT

Instrument Name: AG6890N-6
File Name: 0209126R05.D
Date Acquired: 2/9/2012
Operator: rh

Analyte	Spike ug/L	Calculated ug/L	QC Limits	%R	Status
Methane	44.099	44.910	70-130	101.8%	pass
Acetylene	72.166	76.233	66.4-153	105.6%	pass
Ethene	78.183	83.224	78-138	106.4%	pass
Ethane	83.269	88.601	77-137	106.4%	pass

Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\020912RSK\
Data File : 0209126R05.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 09 Feb 2012 12:53 pm
Operator : rh
Sample : B2B0041-BS1
Misc : LCS
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Feb 10 08:37:42 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) S Acetylene	7.957	26644707	76.233 ug/L
Spiked Amount 66.330 Range 66 - 153		Recovery =	114.93%
Target Compounds			
1) TM Methane	1.527	45719904	44.910 ug/L
3) TM Ethene	8.367	73897158	83.224 ug/L
4) TM Ethane	9.005	85639059	88.601 ug/L
5) Qual Propane	0.000	0	N.D.
6) Qual Butane	0.000	0	N.D.

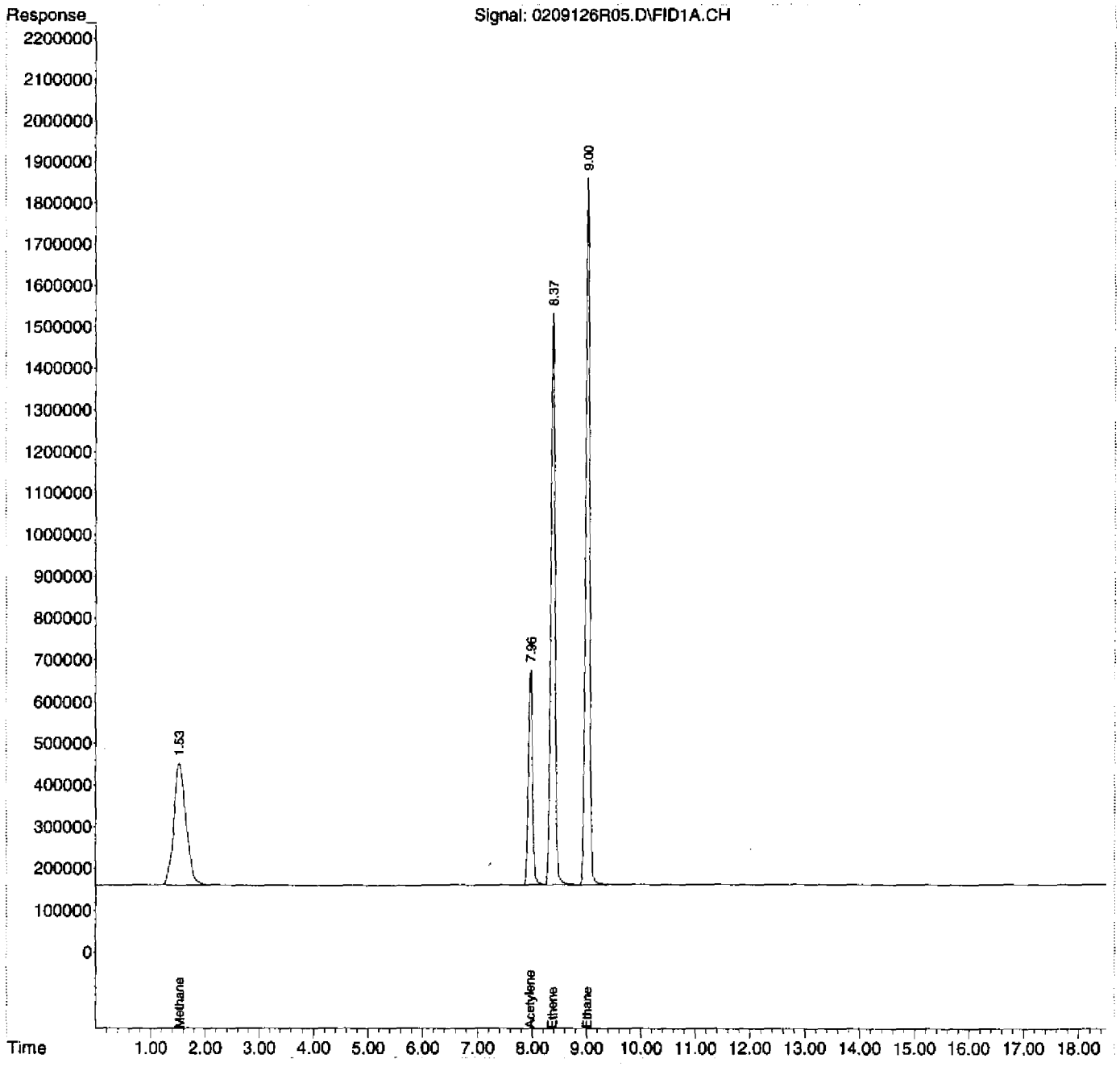
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\020912RSK\
Data File : 0209126R05.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 09 Feb 2012 12:53 pm
Operator : rh
Sample : B2B0041-BS1
Misc : LCS
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Feb 10 08:37:42 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm



Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\020912RSK\
Data File : 0209126R06.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 09 Feb 2012 1:19 pm
Operator : rh
Sample : 1202020-03RE1
Misc : HW31 0.15 ML
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Feb 10 08:37:50 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) S Acetylene	7.959	26905524	76.979 ug/L
Spiked Amount 66.330 Range 66 - 153		Recovery =	116.05%
Target Compounds			
1) TM Methane	1.529	161085273	158.232 ug/L
3) TM Ethene	0.000	0	N.D. ug/L
4) TM Ethane	0.000	0	N.D. ug/L
5) Qual Propane	0.000	0	N.D.
6) Qual Butane	0.000	0	N.D.

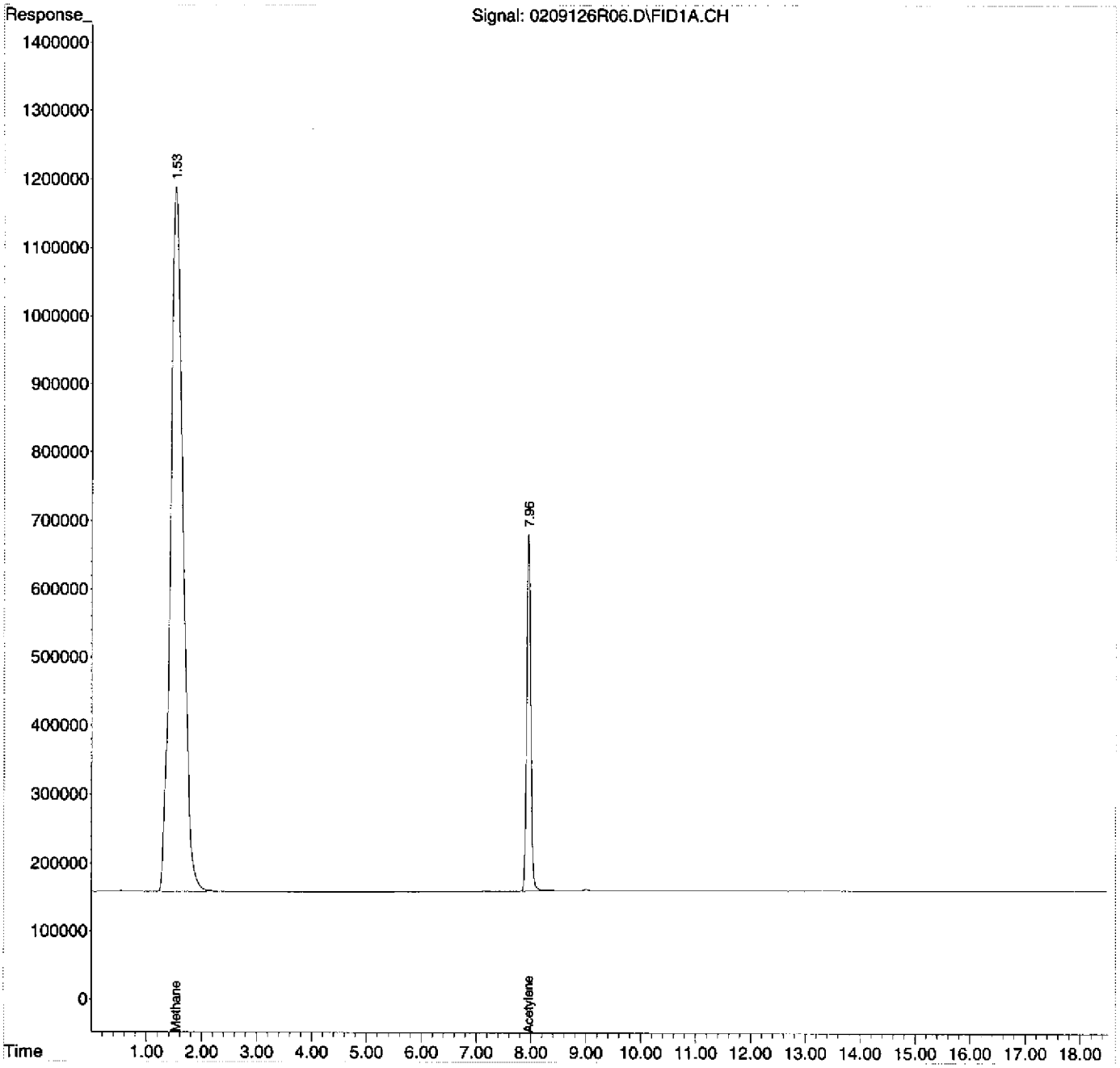
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\020912RSK\
Data File : 0209126R06.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 09 Feb 2012 1:19 pm
Operator : rh
Sample : 1202020-03RE1
Misc : HW31 0.15 ML
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Feb 10 08:37:50 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm



Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\020912RSK\
Data File : 0209126R07.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 09 Feb 2012 1:46 pm
Operator : rh
Sample : 1202020-05RE1
Misc : HW31Z 0.15 ML
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Feb 10 08:37:58 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) S Acetylene	7.957	25684091	73.485 ug/L
Spiked Amount 66.330	Range 66 - 153	Recovery =	110.79%
Target Compounds			
1) TM Methane	1.526	140841264	138.347 ug/L
3) TM Ethene	0.000	0	N.D. ug/L
4) TM Ethane	0.000	0	N.D. ug/L
5) Qual Propane	0.000	0	N.D.
6) Qual Butane	0.000	0	N.D.

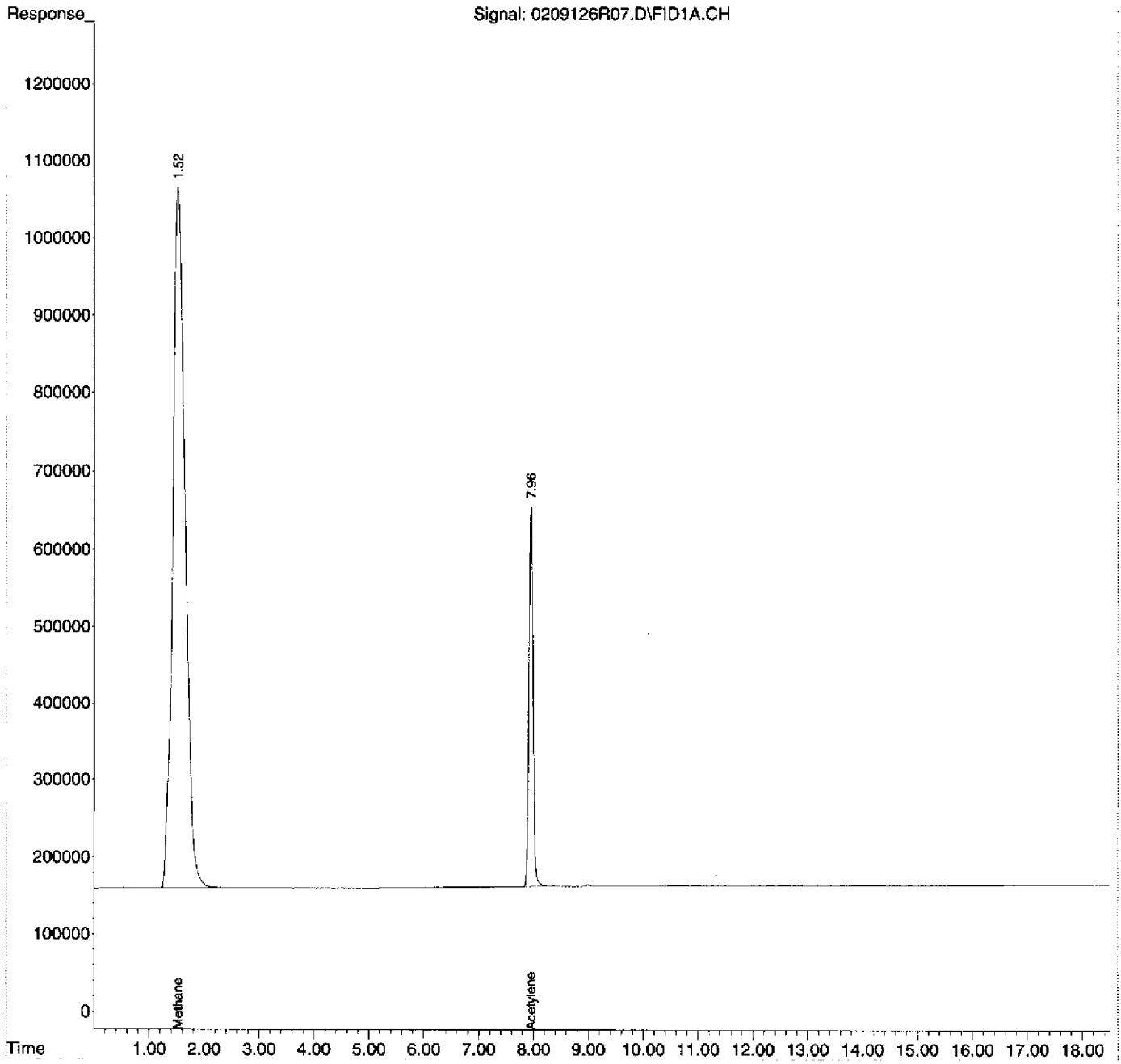
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\020912RSK\
Data File : 0209126R07.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 09 Feb 2012 1:46 pm
Operator : rh
Sample : 1202020-05RE1
Misc : HW31Z 0.15 ML
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Feb 10 08:37:58 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm



Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\020912RSK\
Data File : 0209126R08.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 09 Feb 2012 2:21 pm
Operator : rh
Sample : 1202020-11RE1
Misc : HW15A 0.2 ML
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Feb 10 08:38:06 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) S Acetylene	7.956	27481937	78.629 ug/L
Spiked Amount 66.330 Range 66 - 153		Recovery =	118.54%
Target Compounds			
1) TM Methane	1.528	172687046	169.629 ug/L
3) TM Ethene	0.000	0	N.D. ug/L
4) TM Ethane	9.008	2539893	2.628 ug/L
5) Qual Propane	0.000	0	N.D.
6) Qual Butane	0.000	0	N.D.

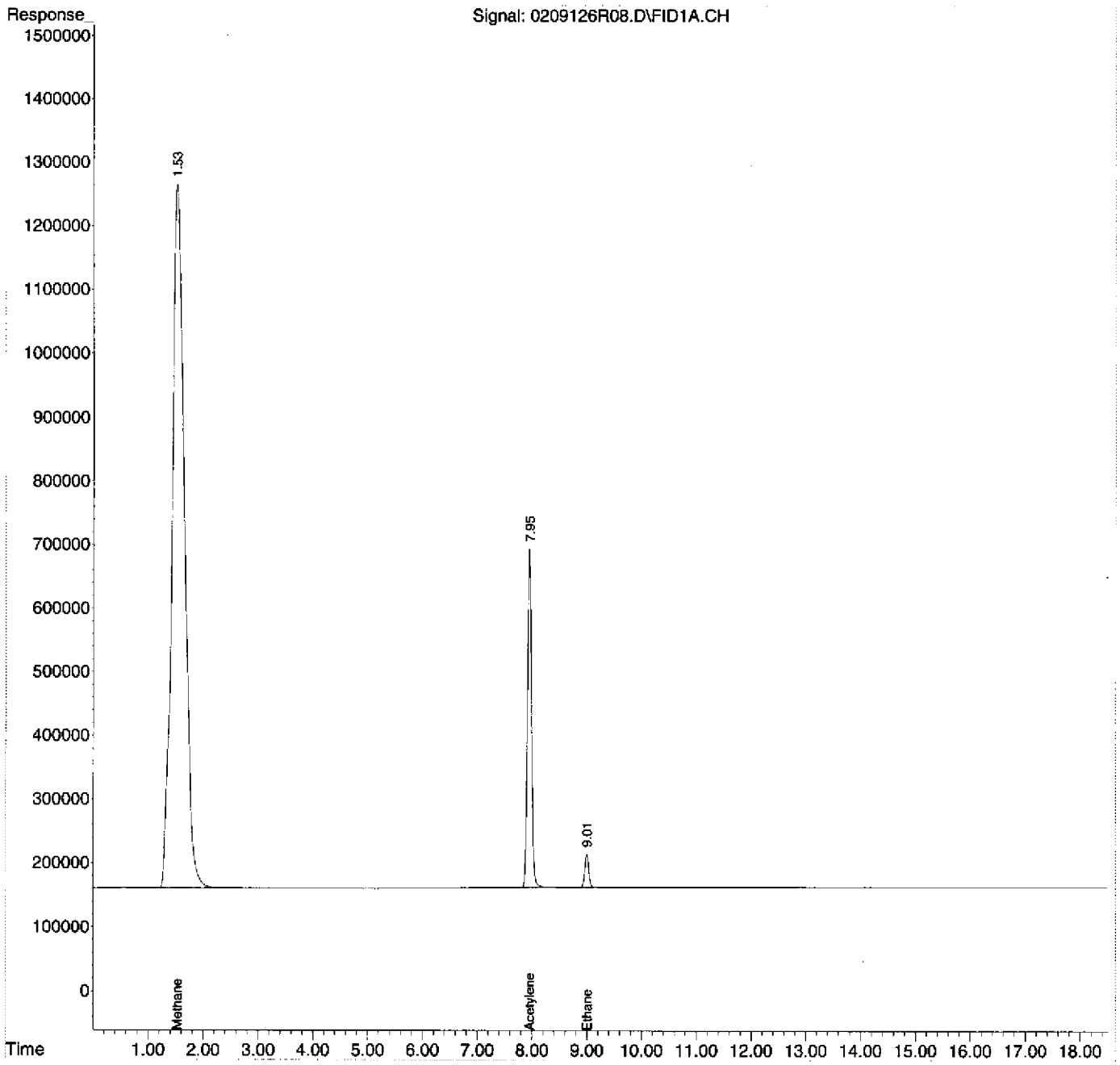
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\020912RSK\
Data File : 0209126R08.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 09 Feb 2012 2:21 pm
Operator : rh
Sample : 1202020-11RE1
Misc : HW15A 0.2 ML
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Feb 10 08:38:06 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm



Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\020912RSK\
Data File : 0209126R09.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 09 Feb 2012 2:48 pm
Operator : rh
Sample : 1202020-12RE1
Misc : HW15AP 16.1ML
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Feb 10 08:38:14 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) S Acetylene	7.955	25317143	72.435 ug/L
Spiked Amount 66.330 Range 66 - 153		Recovery =	109.20%
Target Compounds			
1) TM Methane	1.525	15665845	15.388 ug/L
3) TM Ethene	0.000	0	N.D. ug/L
4) TM Ethane	0.000	0	N.D. ug/L
5) Qual Propane	0.000	0	N.D.
6) Qual Butane	0.000	0	N.D.

(f)=RT Delta > 1/2 Window (m)=manual int.

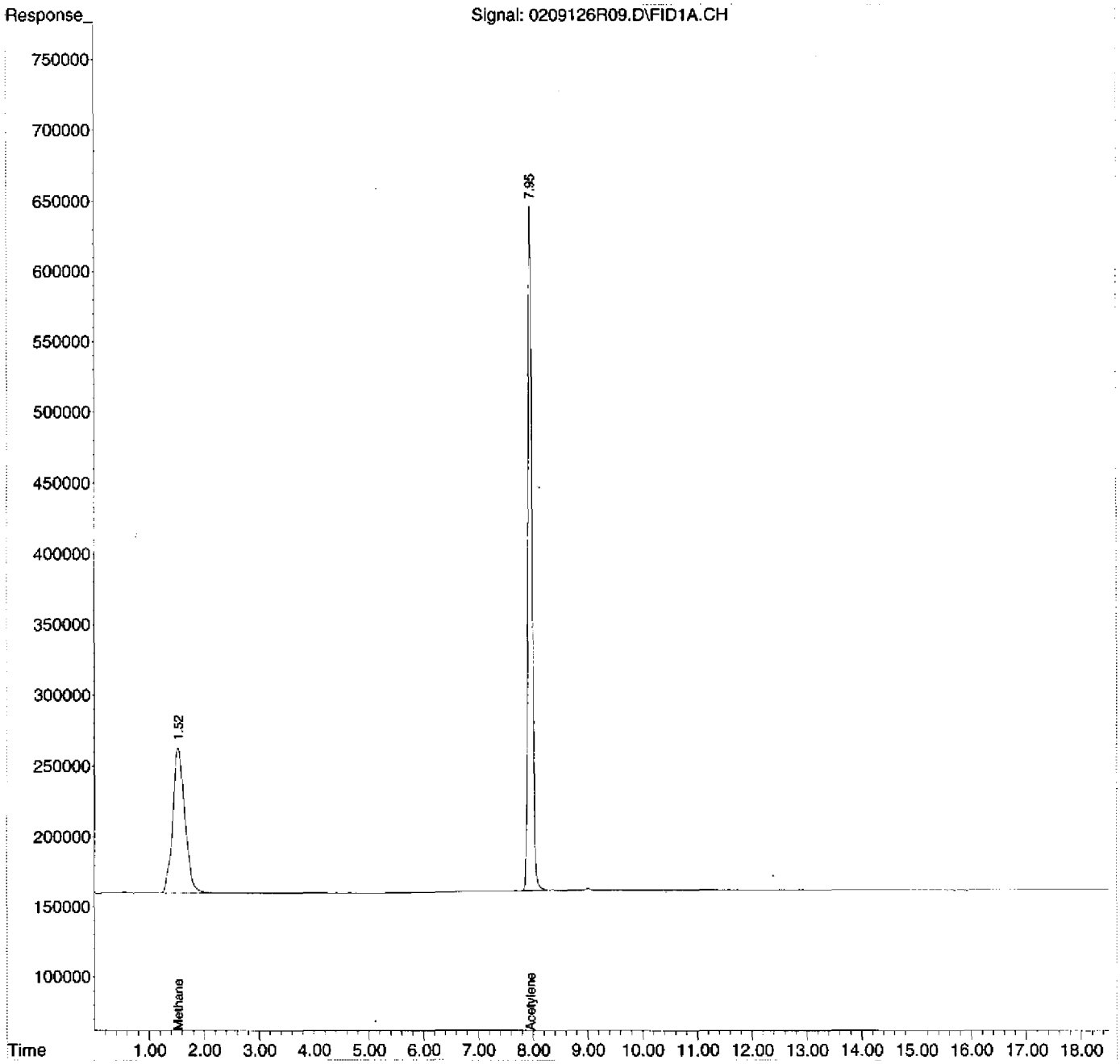
not used

Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\020912RSK\
Data File : 0209126R09.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 09 Feb 2012 2:48 pm
Operator : rh
Sample : 1202020-12RE1
Misc : HW15AP 16.1ML
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Feb 10 08:38:14 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm



Quantitation Report (Not Reviewed) 01629

Data Path : D:\MSDCHEM\1\2012\DATA\020912RSK\
Data File : 0209126R11.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 09 Feb 2012 4:59 pm
Operator : rh
Sample : 1202023-01
Misc : FB12 16.1ML
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Feb 10 08:38:29 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) S Acetylene	7.958	26385912	75.493 ug/L
Spiked Amount 66.330	Range 66 - 153	Recovery =	113.81%
Target Compounds			
1) TM Methane	1.538	934473	0.918 ug/L
3) TM Ethene	0.000	0	N.D. ug/L
4) TM Ethane	0.000	0	N.D. ug/L
5) Qual Propane	0.000	0	N.D.
6) Qual Butane	0.000	0	N.D.

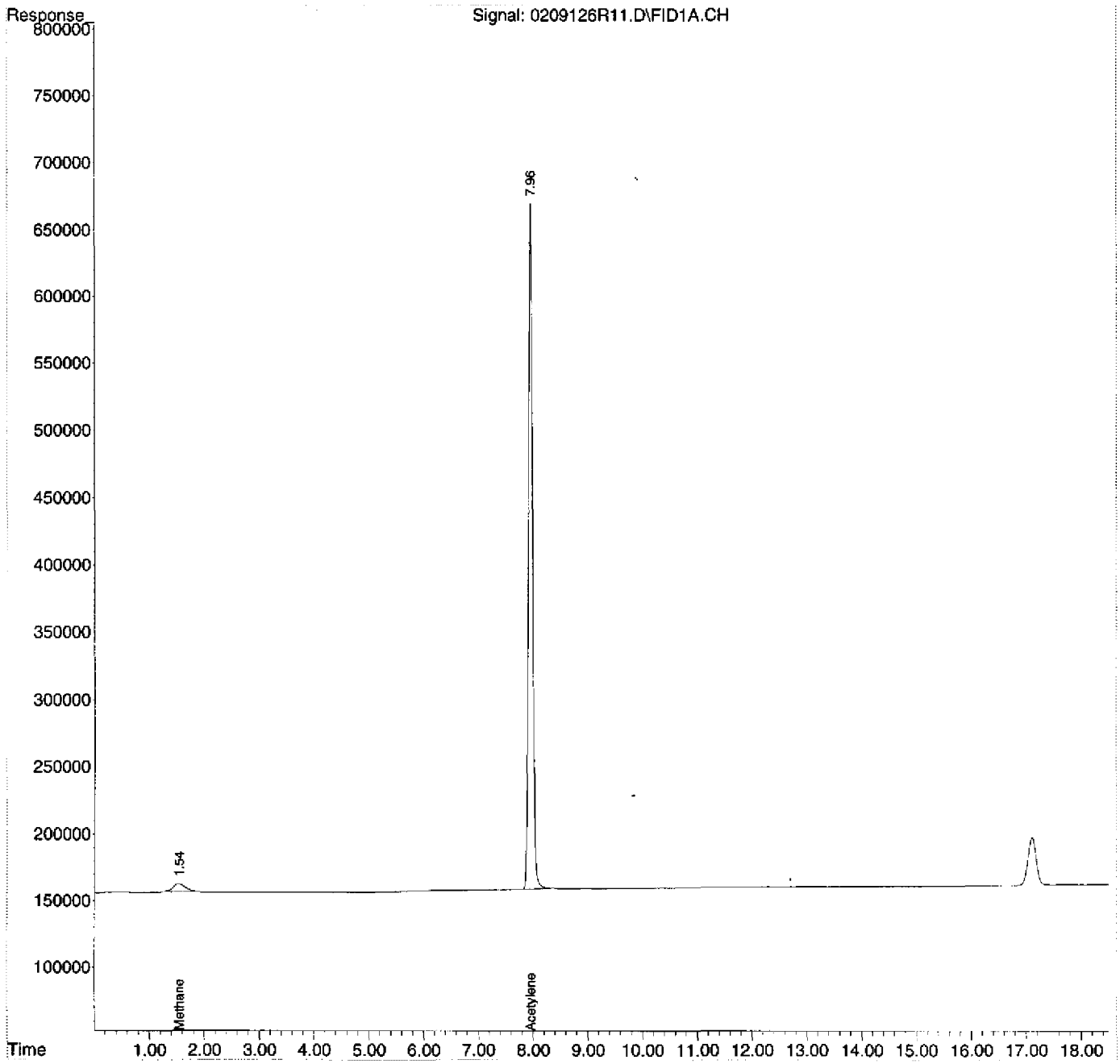
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\020912RSK\
Data File : 0209126R11.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 09 Feb 2012 4:59 pm
Operator : rh
Sample : 1202023-01
Misc : FB12 16.1ML
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Feb 10 08:38:29 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm



Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\020912RSK\
Data File : 0209126R12.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 09 Feb 2012 5:25 pm
Operator : rh
Sample : 1202023-04
Misc : TB27 16.1ML
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Feb 10 08:38:37 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) S Acetylene	7.958	28088768	80.365 ug/L
Spiked Amount 66.330 Range 66 - 153		Recovery =	121.16%
Target Compounds			
1) TM Methane	1.532	902804	0.887 ug/L
3) TM Ethene	0.000	0	N.D. ug/L
4) TM Ethane	0.000	0	N.D. ug/L
5) Qual Propane	0.000	0	N.D.
6) Qual Butane	0.000	0	N.D.

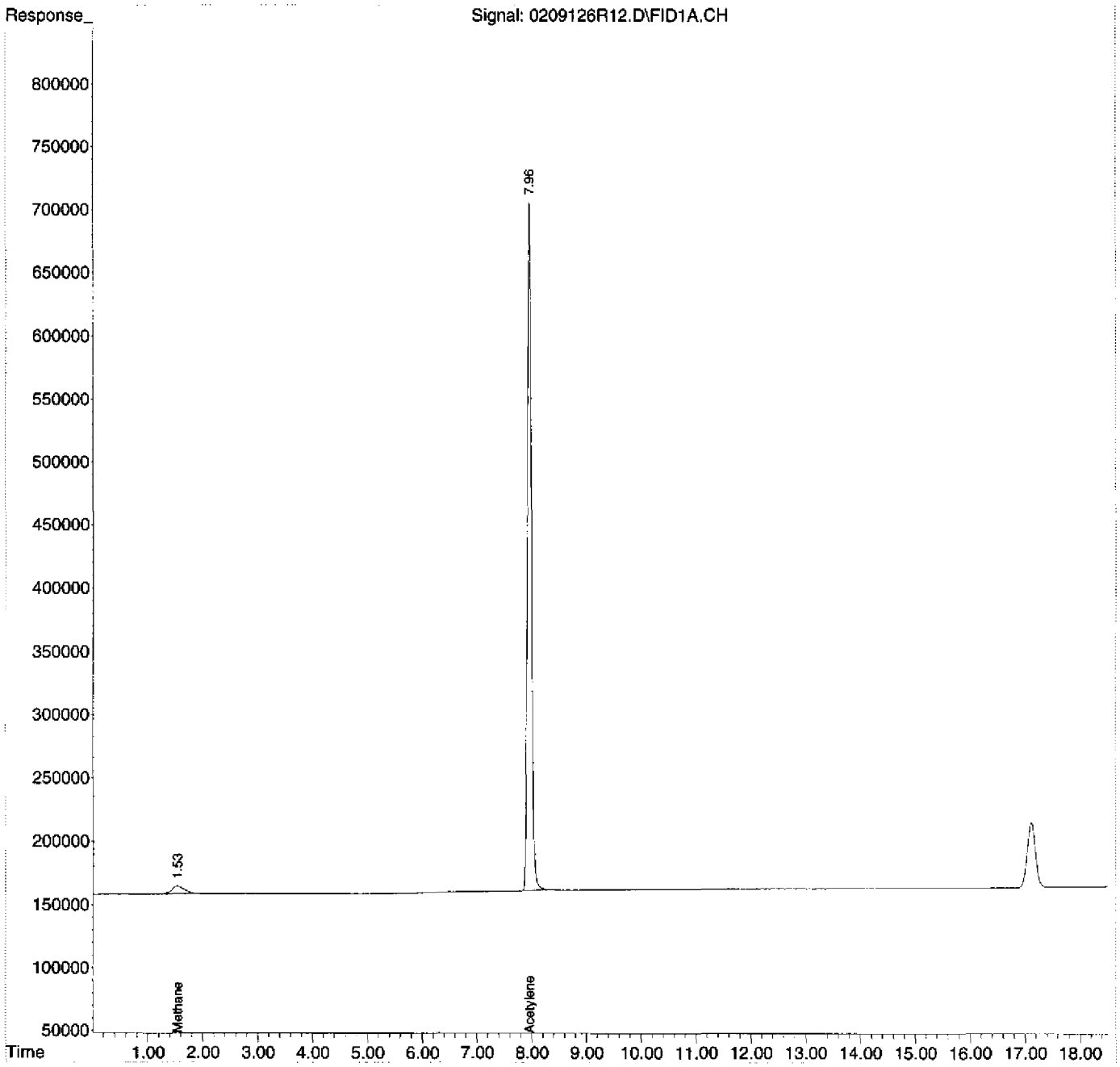
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\020912RSK\
Data File : 0209126R12.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 09 Feb 2012 5:25 pm
Operator : rh
Sample : 1202023-04
Misc : TB27 16.1ML
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Feb 10 08:38:37 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm



Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\020912RSK\
Data File : 0209126R13.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 09 Feb 2012 6:00 pm
Operator : rh
Sample : 1202023-07
Misc : TB29 16.1ML
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Feb 10 08:38:45 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) S Acetylene	7.958	26286860	75.209 ug/L
Spiked Amount 66.330 Range 66 - 153		Recovery =	113.39%
Target Compounds			
1) TM Methane	1.537	850084	0.835 ug/L
3) TM Ethene	0.000	0	N.D. ug/L
4) TM Ethane	0.000	0	N.D. ug/L
5) Qual Propane	0.000	0	N.D.
6) Qual Butane	0.000	0	N.D.

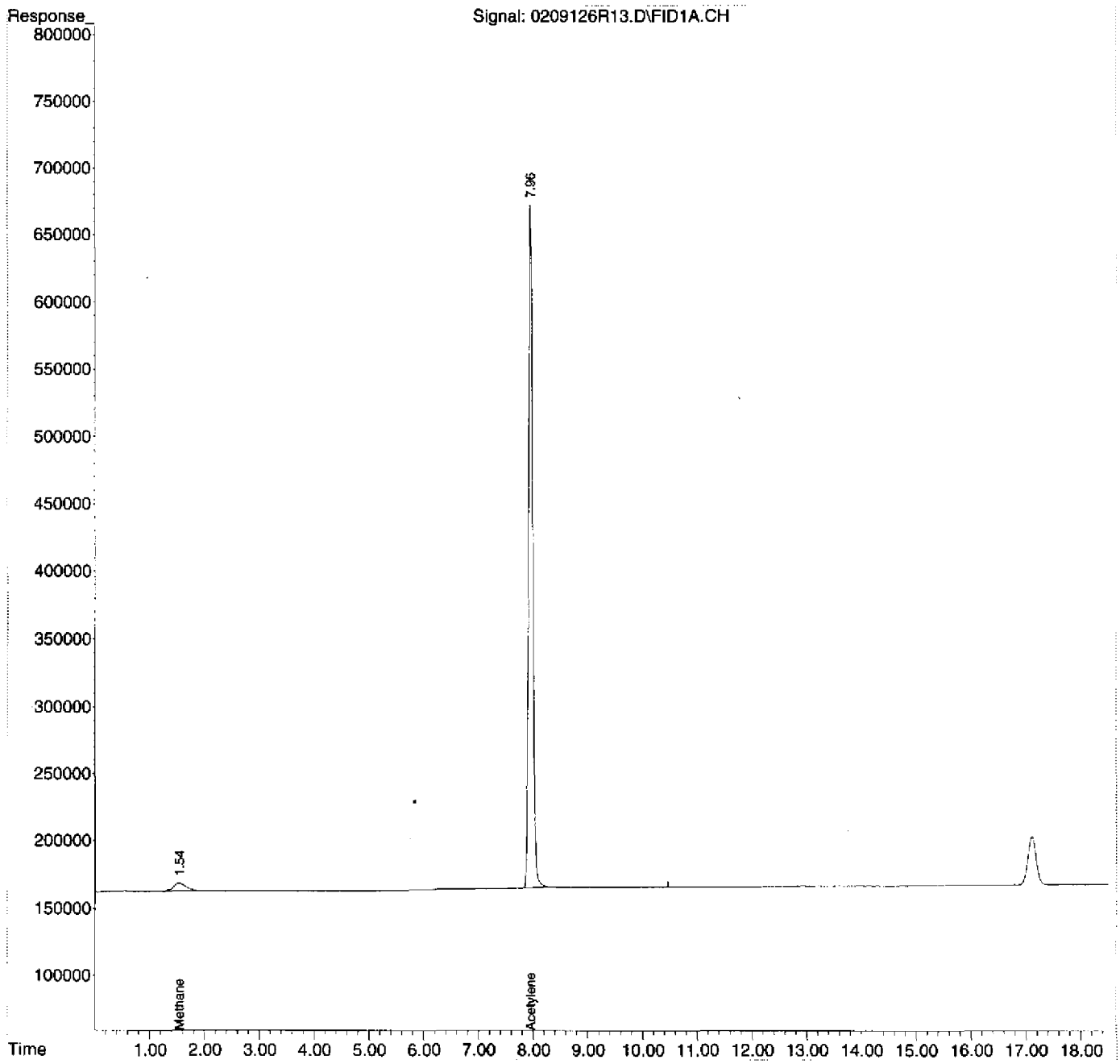
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\020912RSK\
Data File : 0209126R13.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 09 Feb 2012 6:00 pm
Operator : rh
Sample : 1202023-07
Misc : TB29 16.1ML
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Feb 10 08:38:45 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm



Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\020912RSK\
Data File : 0209126R14.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 09 Feb 2012 6:26 pm
Operator : rh
Sample : 1202023-08
Misc : FB13 16.1ML
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Feb 10 08:38:53 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) S Acetylene	7.958	26282941	75.198 ug/L
Spiked Amount 66.330	Range 66 - 153	Recovery =	113.37%
Target Compounds			
1) TM Methane	1.524	880565	0.865 ug/L
3) TM Ethene	0.000	0	N.D. ug/L
4) TM Ethane	0.000	0	N.D. ug/L
5) Qual Propane	0.000	0	N.D.
6) Qual Butane	0.000	0	N.D.

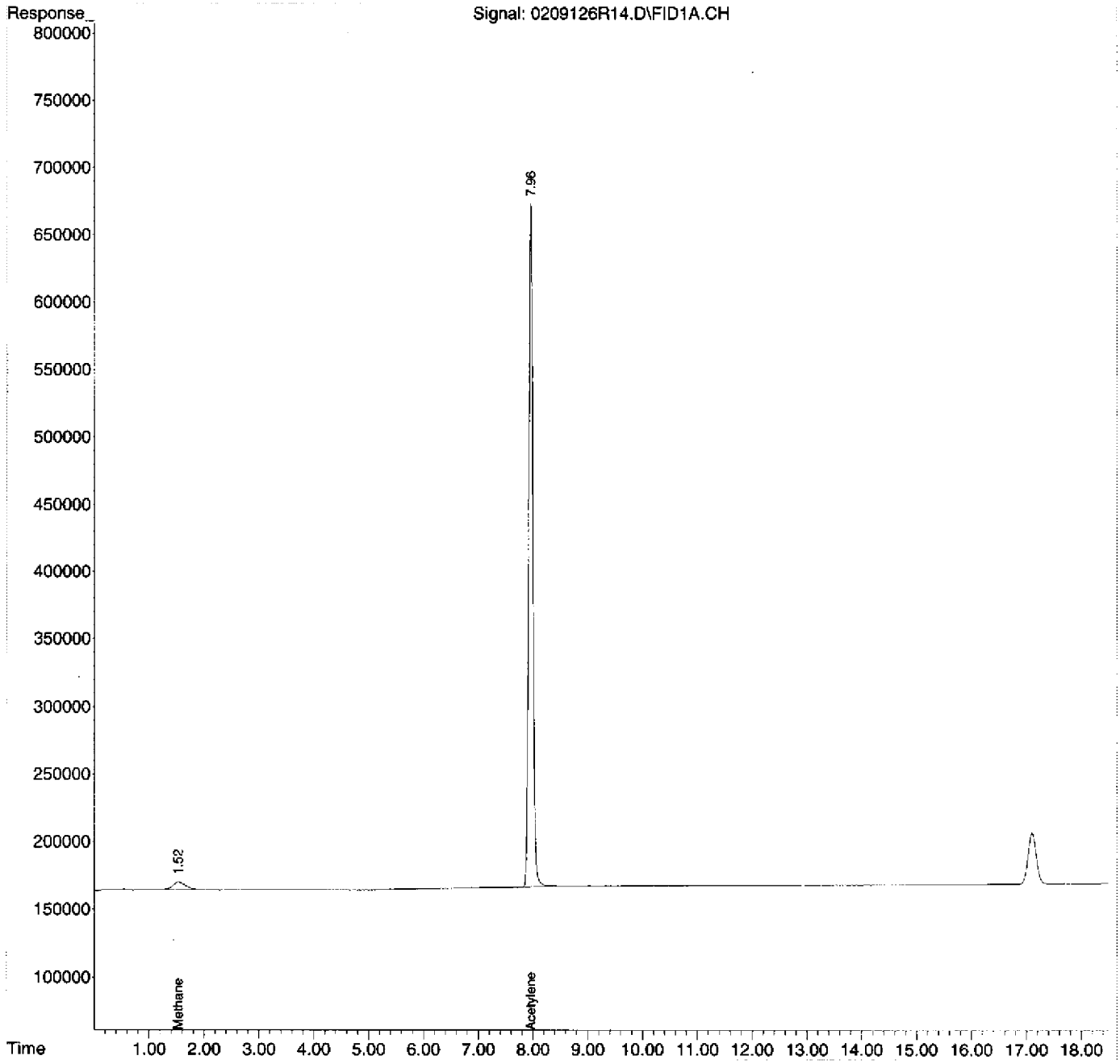
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\020912RSK\
Data File : 0209126R14.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 09 Feb 2012 6:26 pm
Operator : rh
Sample : 1202023-08
Misc : FB13 16.1ML
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Feb 10 08:38:53 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm



Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\020912RSK\
Data File : 0209126R15.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 09 Feb 2012 7:01 pm
Operator : rh
Sample : 1202023-11
Misc : TB30 16.1ML
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Feb 10 08:39:01 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) S Acetylene	7.958	26737918	76.500 ug/L
Spiked Amount 66.330 Range 66 - 153		Recovery =	115.33%
Target Compounds			
1) TM Methane	1.525	760060	0.747 ug/L
3) TM Ethene	0.000	0	N.D. ug/L
4) TM Ethane	0.000	0	N.D. ug/L
5) Qual Propane	0.000	0	N.D.
6) Qual Butane	0.000	0	N.D.

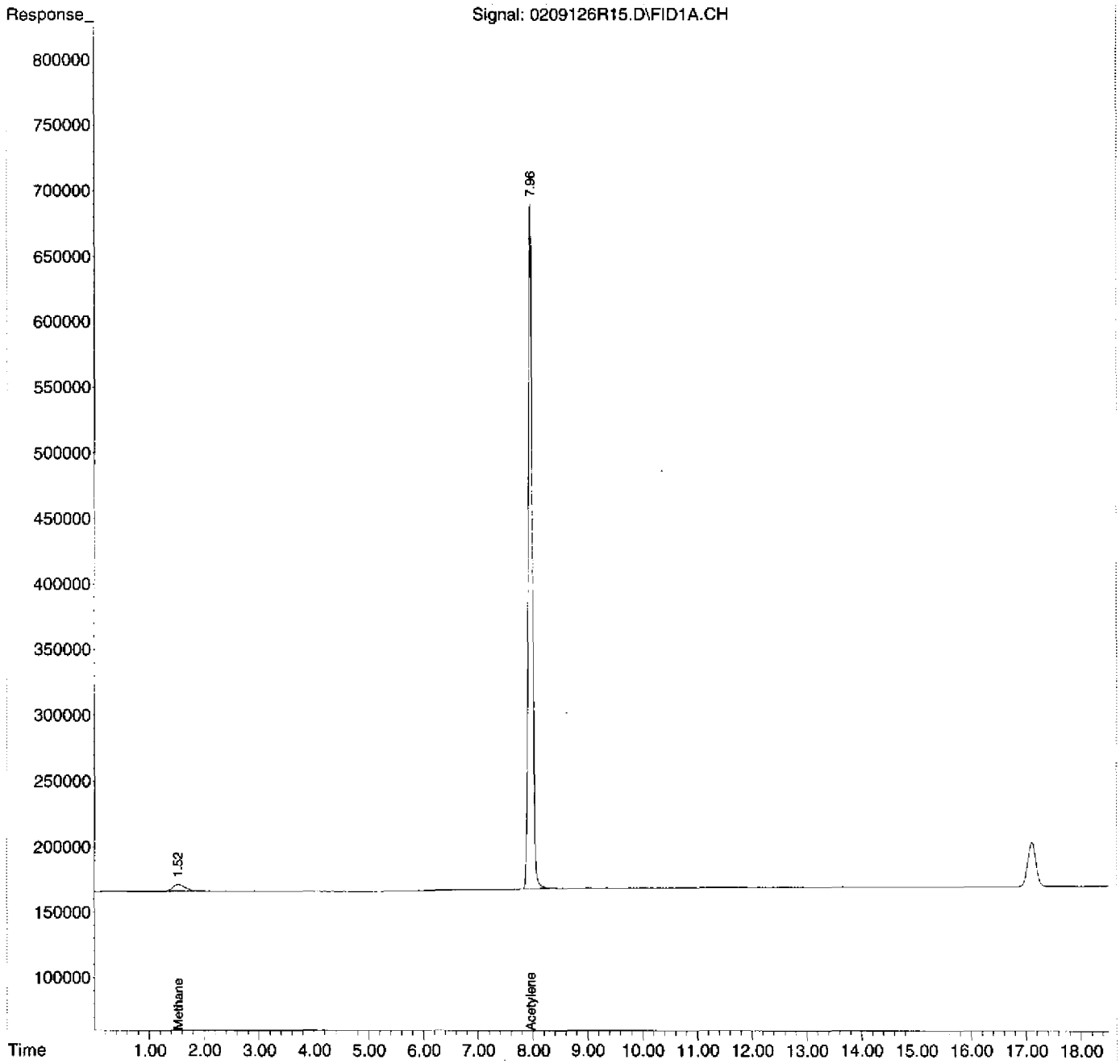
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\020912RSK\
Data File : 0209126R15.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 09 Feb 2012 7:01 pm
Operator : rh
Sample : 1202023-11
Misc : TB30 16.1ML
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Feb 10 08:39:01 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm



Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\020912RSK\
Data File : 0209126R16.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 09 Feb 2012 7:27 pm
Operator : rh
Sample : 2020032-IBL1
Misc : IB
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Feb 10 08:39:09 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) S Acetylene	7.957	26176647	74.894 ug/L
Spiked Amount 66.330 Range 66 - 153		Recovery =	112.91%
Target Compounds			
1) TM Methane	1.536	725324	0.712 ug/L
3) TM Ethene	0.000	0	N.D. ug/L
4) TM Ethane	0.000	0	N.D. ug/L
5) Qual Propane	0.000	0	N.D.
6) Qual Butane	0.000	0	N.D.

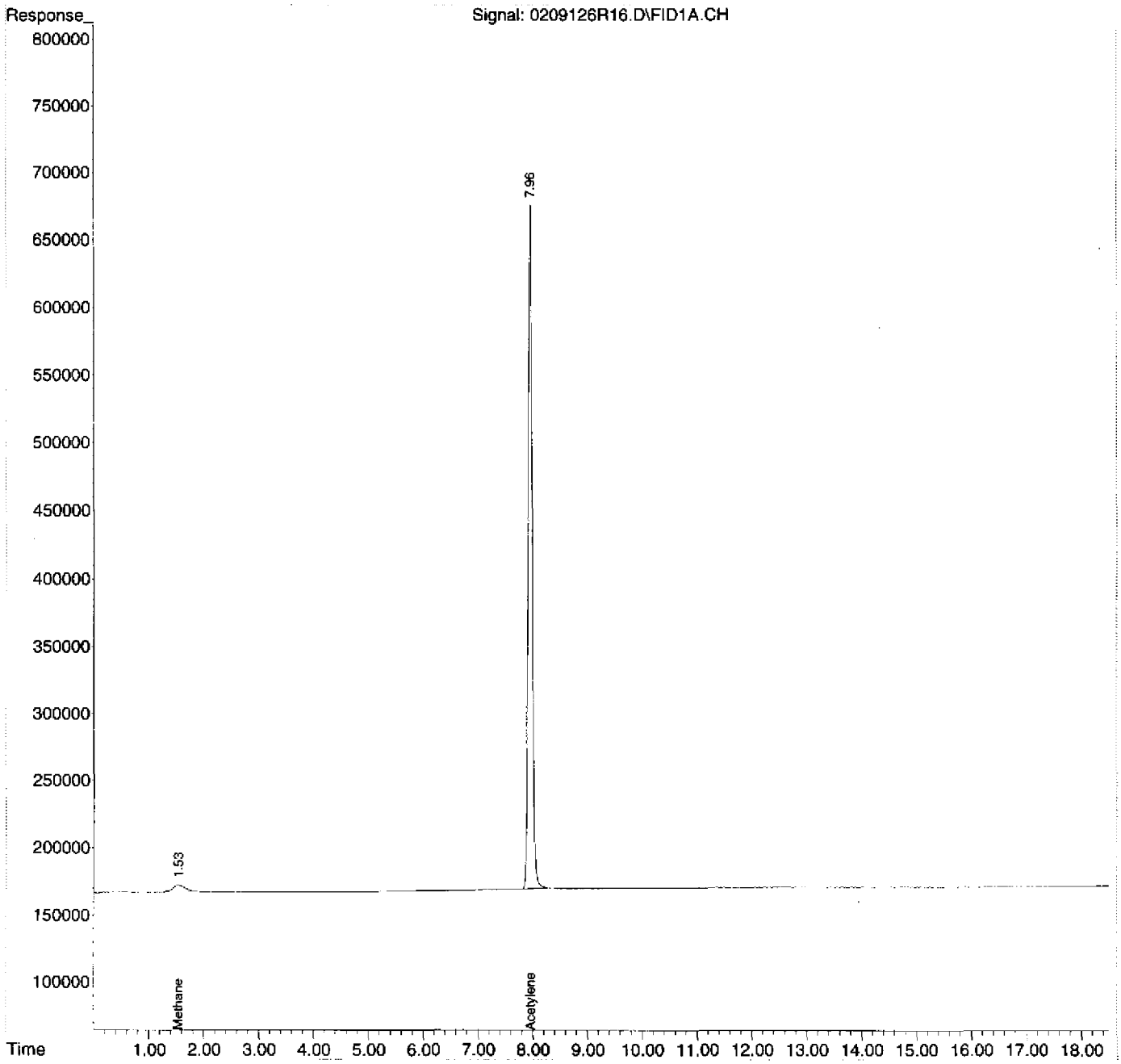
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\020912RSK\
Data File : 0209126R16.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 09 Feb 2012 7:27 pm
Operator : rh
Sample : 2020032-IBL1
Misc : IB
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Feb 10 08:39:09 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm



Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\020912RSK\
Data File : 0209126R17.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 09 Feb 2012 8:02 pm
Operator : rh
Sample : 1202023-02
Misc : HW51 16.1ML
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Feb 10 08:39:17 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) S Acetylene	7.956	25465941	72.861 ug/L
Spiked Amount 66.330 Range 66 - 153		Recovery =	109.85%
Target Compounds			
1) TM Methane	1.517	2488520698	2444.449 ug/L — o.c.
3) TM Ethene	0.000	0	N.D. ug/L
4) TM Ethane	9.006	72353642	74.856 ug/L
5) Qual Propane	0.000	0	N.D.
6) Qual Butane	0.000	0	N.D.

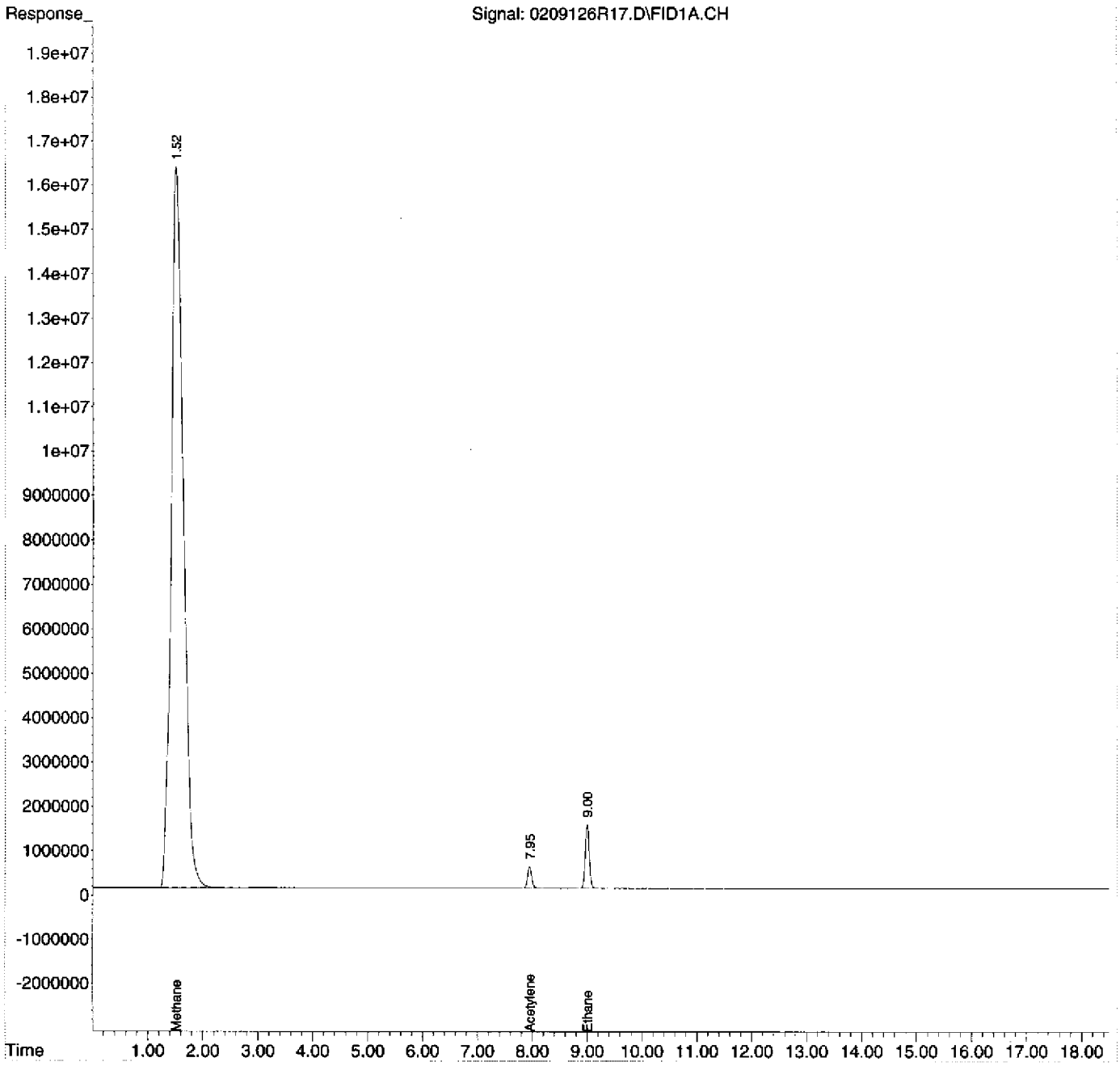
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\020912RSK\
Data File : 0209126R17.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 09 Feb 2012 8:02 pm
Operator : rh
Sample : 1202023-02
Misc : HW51 16.1ML
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Feb 10 08:39:17 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm



Quantitation Report (Not Reviewed) 01643

Data Path : D:\MSDCHEM\1\2012\DATA\020912RSK\
Data File : 0209126R18.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 09 Feb 2012 8:28 pm
Operator : rh
Sample : 1202023-03
Misc : HW51-P 16.1ML
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Feb 10 08:39:25 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
2) S Acetylene	7.957	26010381	74.418	ug/L
Spiked Amount 66.330 Range 66 - 153	Recovery = 112.19%			
Target Compounds				
1) TM Methane	1.514	3550816190	3487.932	ug/L — o.c.
3) TM Ethene	0.000	0	N.D.	ug/L
4) TM Ethane	9.005	97788964	101.171	ug/L
5) Qual Propane	0.000	0	N.D.	
6) Qual Butane	0.000	0	N.D.	

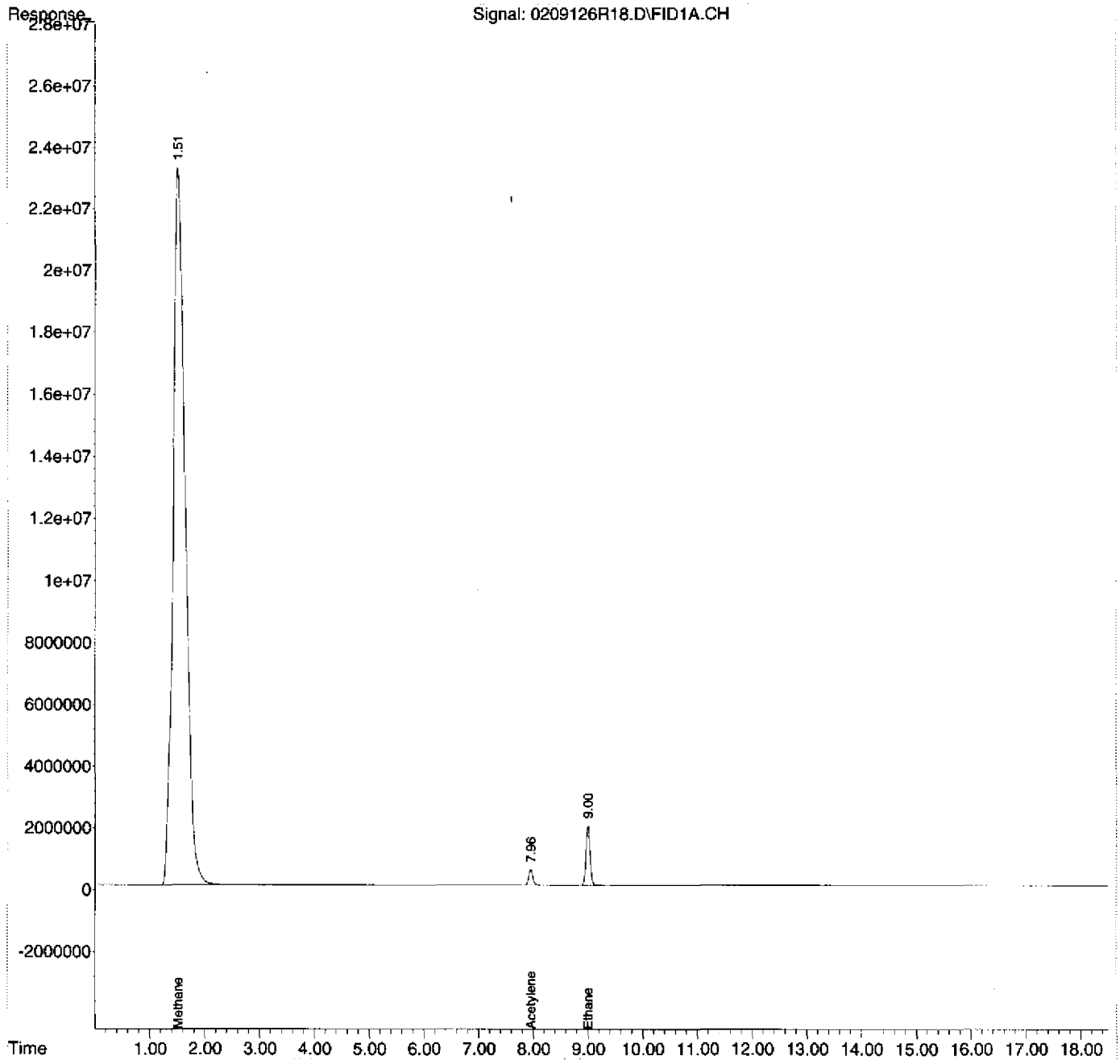
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\020912RSK\
Data File : 0209126R18.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 09 Feb 2012 8:28 pm
Operator : rh
Sample : 1202023-03
Misc : HW51-P 16.1ML
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Feb 10 08:39:25 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm



Quantitation Report (Not Reviewed) 0164E

Data Path : D:\MSDCHEM\1\2012\DATA\020912RSK\
Data File : 0209126R19.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 09 Feb 2012 8:55 pm
Operator : rh
Sample : 1202023-05
Misc : HW47 16.1ML
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Feb 10 08:39:33 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
2) S Acetylene	7.956	25081046	71.759	ug/L
Spiked Amount 66.330 Range 66 - 153		Recovery = 108.18%		
Target Compounds				
1) TM Methane	1.504	5508148876	5410.600	ug/L
3) TM Ethene	0.000	0	N.D.	ug/L
4) TM Ethane	9.009	388668	0.402	ug/L
5) Qual Propane	0.000	0	N.D.	
6) Qual Butane	0.000	0	N.D.	

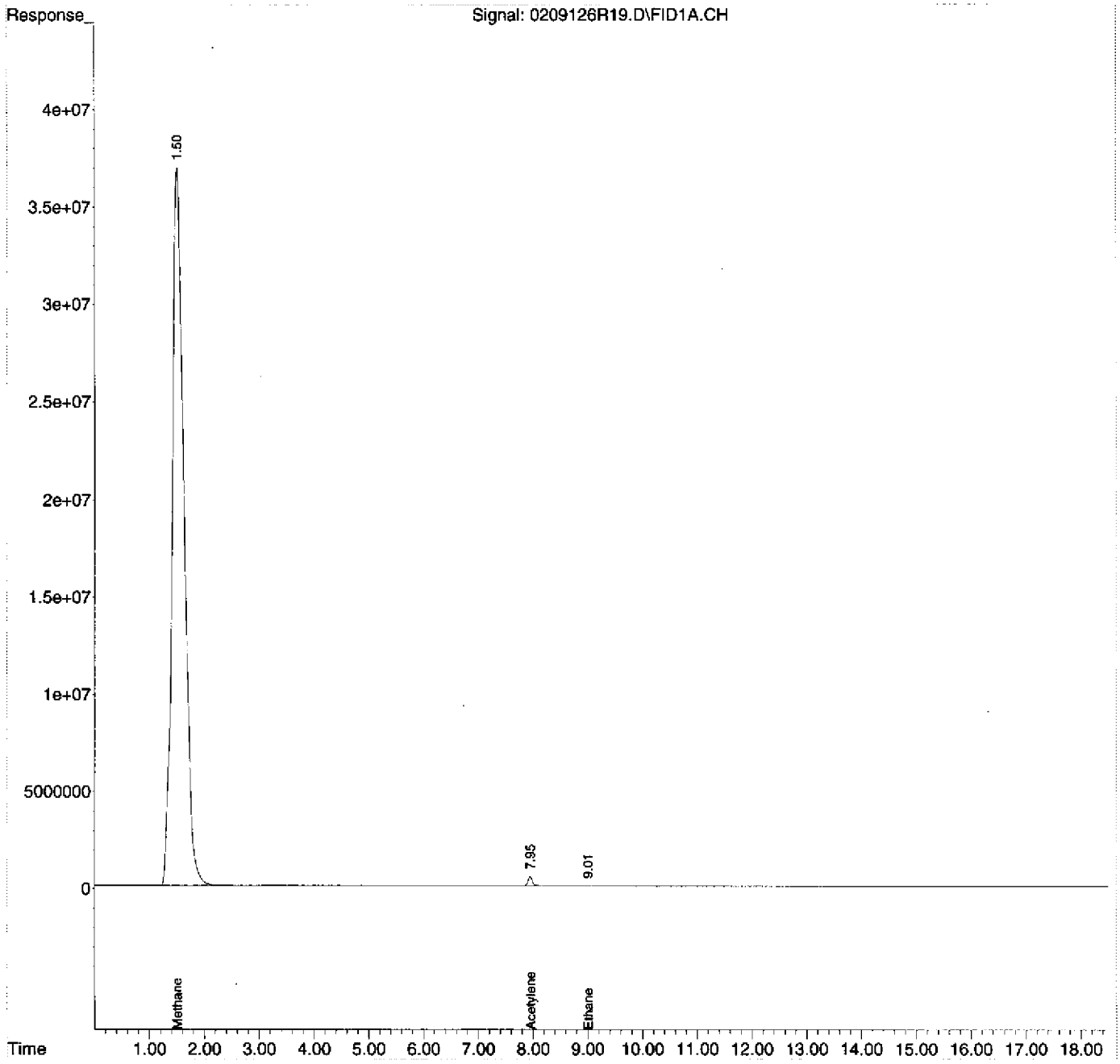
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\020912RSK\
Data File : 0209126R19.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 09 Feb 2012 8:55 pm
Operator : rh
Sample : 1202023-05
Misc : HW47 16.1ML
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Feb 10 08:39:33 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm



Quantitation Report (Not Reviewed) 01647

Data Path : D:\MSDCHEM\1\2012\DATA\020912RSK\
Data File : 0209126R20.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 09 Feb 2012 9:30 pm
Operator : rh
Sample : 1202023-06
Misc : HW47-P 16.1ML
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Feb 10 08:39:41 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
2) S Acetylene	7.955	24520705	70.156	ug/L
Spiked Amount 66.330 Range 66 - 153		Recovery = 105.77%		
Target Compounds				
1) TM Methane	1.501	6469876211	6355.296	ug/L
3) TM Ethene	0.000	0	N.D.	ug/L
4) TM Ethane	9.008	569181	0.589	ug/L
5) Qual Propane	0.000	0	N.D.	
6) Qual Butane	0.000	0	N.D.	

— a.c.

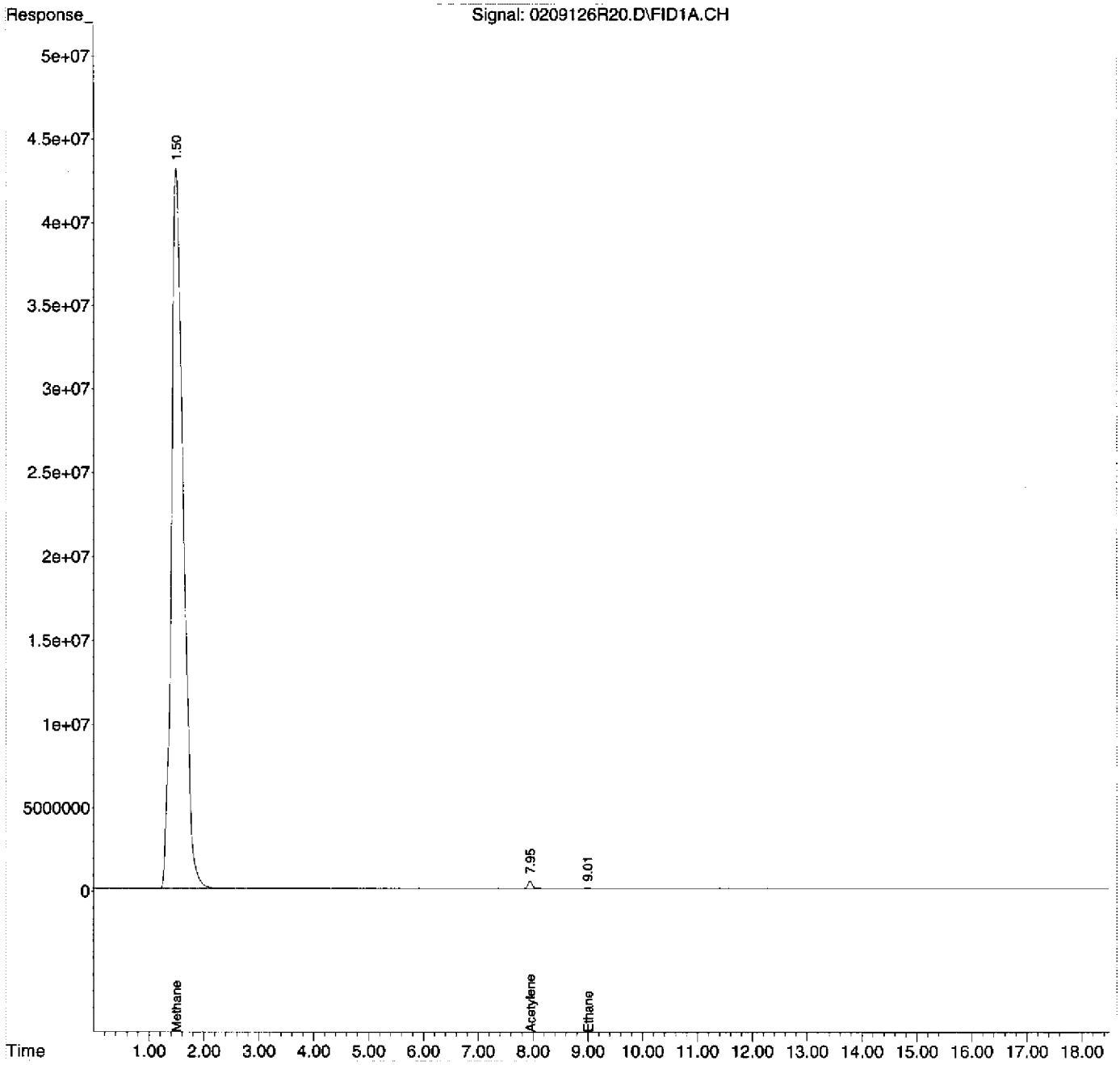
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\020912RSK\
Data File : 0209126R20.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 09 Feb 2012 9:30 pm
Operator : rh
Sample : 1202023-06
Misc : HW47-P 16.1ML
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Feb 10 08:39:41 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm



Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\020912RSK\
Data File : 0209126R21.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 09 Feb 2012 9:56 pm
Operator : rh
Sample : 1202023-09
Misc : HW38 16.1ML
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Feb 10 08:39:49 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) S Acetylene	7.958	26314501	75.288 ug/L
Spiked Amount 66.330	Range 66 - 153	Recovery =	113.51%
Target Compounds			
1) TM Methane	1.529	5125862	5.035 ug/L
3) TM Ethene	0.000	0	N.D. ug/L
4) TM Ethane	0.000	0	N.D. ug/L
5) Qual Propane	0.000	0	N.D.
6) Qual Butane	0.000	0	N.D.

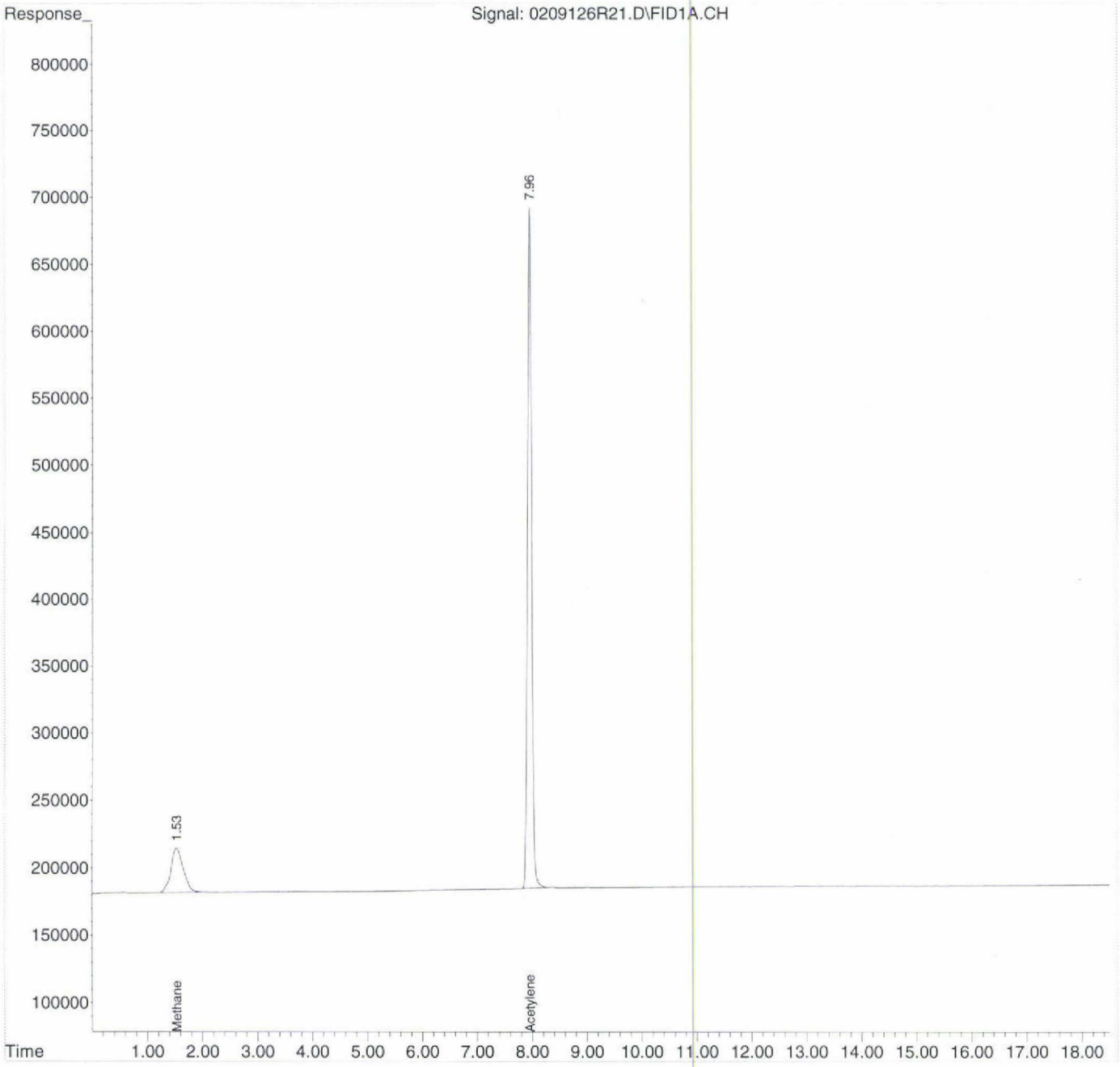
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\020912RSK\
Data File : 0209126R21.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 09 Feb 2012 9:56 pm
Operator : rh
Sample : 1202023-09
Misc : HW38 16.1ML
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Feb 10 08:39:49 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm



Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\020912RSK\
Data File : 0209126R22.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 09 Feb 2012 10:23 pm
Operator : rh
Sample : 1202023-10
Misc : HW38-P 16.1ML
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Feb 10 08:39:57 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) S Acetylene	7.957	26084613	74.631 ug/L
Spiked Amount 66.330 Range 66 - 153		Recovery =	112.51%
Target Compounds			
1) TM Methane	1.529	3911727	3.842 ug/L
3) TM Ethene	0.000	0	N.D. ug/L
4) TM Ethane	0.000	0	N.D. ug/L
5) Qual Propane	0.000	0	N.D.
6) Qual Butane	0.000	0	N.D.

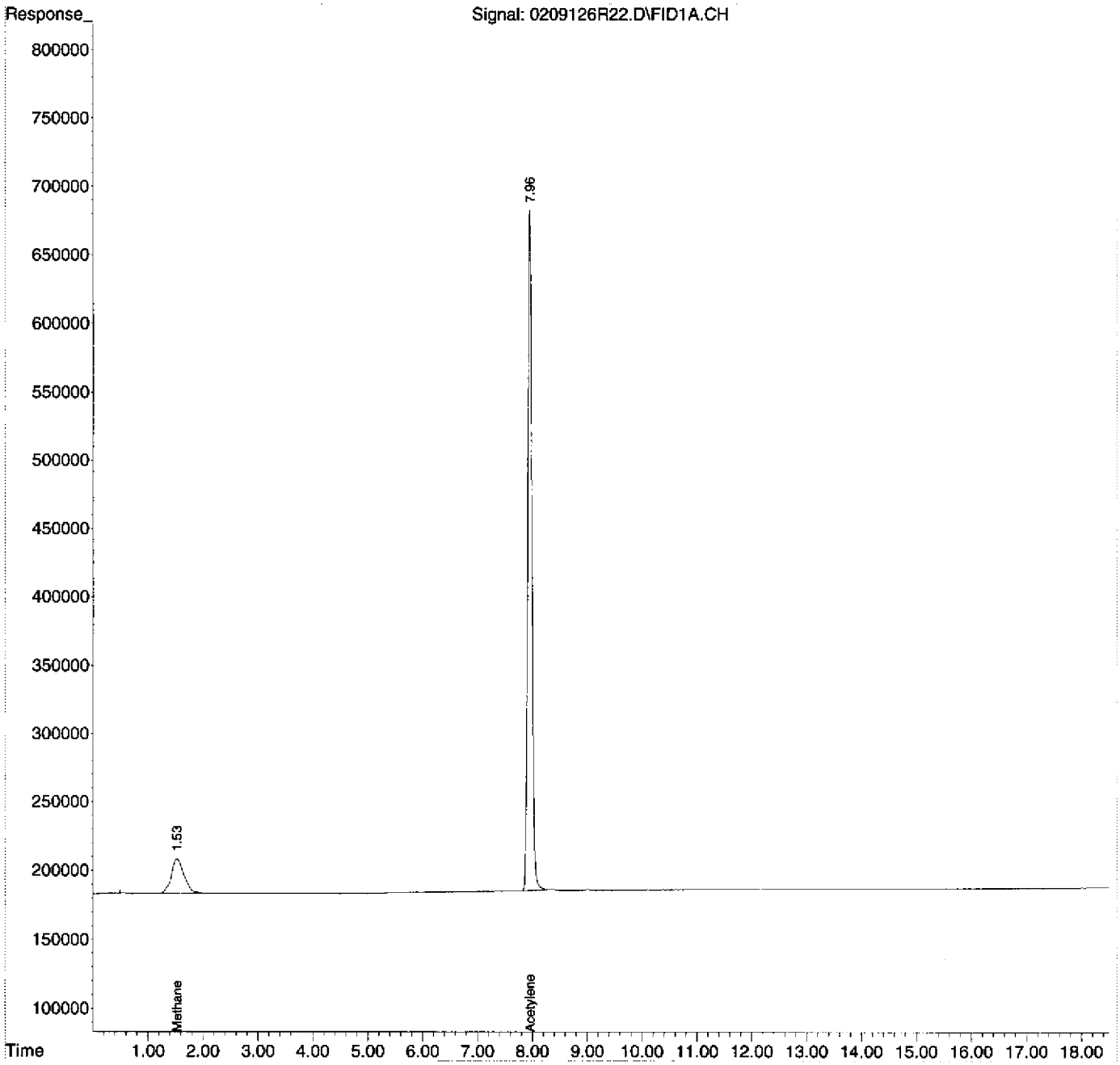
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\020912RSK\
Data File : 0209126R22.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 09 Feb 2012 10:23 pm
Operator : rh
Sample : 1202023-10
Misc : HW38-P 16.1ML
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Feb 10 08:39:57 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm



Evaluate Continuing Calibration Report

Data Path : D:\MSDCHEM\1\2012\DATA\020912RSK\
Data File : 0209126R23.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 09 Feb 2012 10:58 pm
Operator : rh
Sample : 2020032-CCV2
Misc : 2B09005
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Feb 10 08:40:05 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
1 TM	Methane	1.018	1.041 E6	-2.3	104	0.00
2 S	Acetylene	349.516	365.049 E3	-4.4	98	-0.02
3 TM	Ethene	887.936	928.494 E3	-4.6	102	0.00
4 TM	Ethane	966.567	1010.400 E3	-4.5	103	0.01

Evaluate Continuing Calibration Report - Not Founds

5	QualPropane	0.000	0.000	0.0	0#	-12.89#
6	QualButane	0.000	0.000	0.0	0#	-17.72#

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\020912RSK\
Data File : 0209126R23.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 09 Feb 2012 10:58 pm
Operator : rh
Sample : 2020032-CCV2
Misc : 2B09005
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Feb 10 08:40:05 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) S Acetylene	7.961	7903305	22.612 ug/L
Spiked Amount 66.330 Range 66 - 153	Recovery = 34.09%#		
Target Compounds			
1) TM Methane	1.533	13774229	13.530 ug/L
3) TM Ethene	8.370	21777818	24.526 ug/L
4) TM Ethane	9.008	25240805	26.114 ug/L
5) Qual Propane	0.000	0	N.D.
6) Qual Butane	0.000	0	N.D.

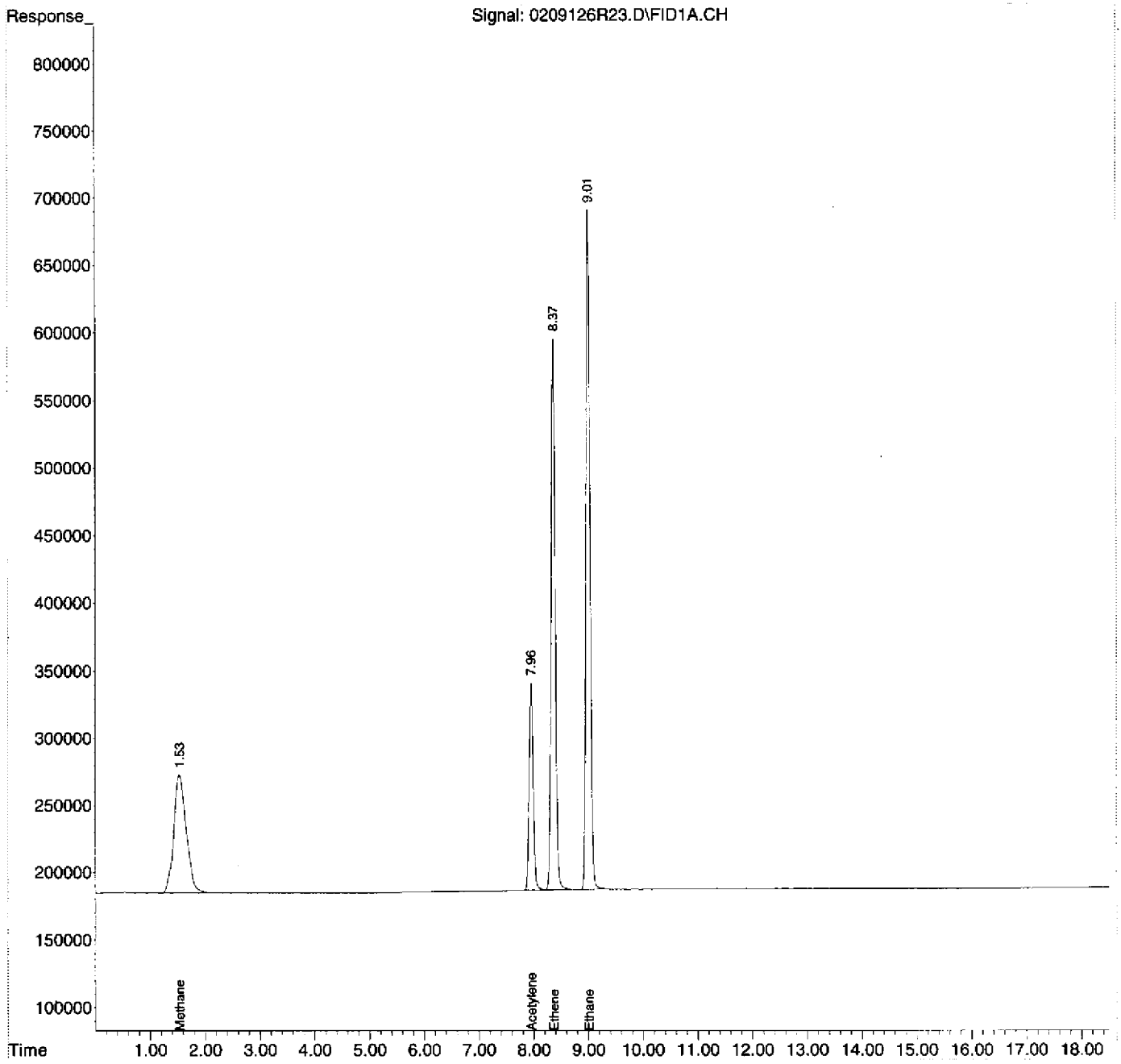
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\020912RSK\
Data File : 0209126R23.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 09 Feb 2012 10:58 pm
Operator : rh
Sample : 2020032-CCV2
Misc : 2B09005
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Feb 10 08:40:05 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm



00149

DIM0279368 DIM0279541

Quantitation Report (Not Reviewed) 0165E

Data Path : D:\MSDCHEM\1\2012\DATA\020912RSK\
Data File : 0209126R24.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 09 Feb 2012 11:24 pm
Operator : rh
Sample : 2020032-CCV3
Misc : 2B09005
ALS Vial : 24 Sample Multiplier: 1

Quant Time: Feb 10 08:40:13 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) S Acetylene	7.962	7909495	22.630 ug/L
Spiked Amount 66.330 Range 66 - 153		Recovery =	34.12%#
Target Compounds			
1) TM Methane	1.529	12982241	12.752 ug/L
3) TM Ethene	8.369	20648832	23.255 ug/L
4) TM Ethane	9.008	23767750	24.590 ug/L
5) Qual Propane	0.000	0	N.D.
6) Qual Butane	0.000	0	N.D.

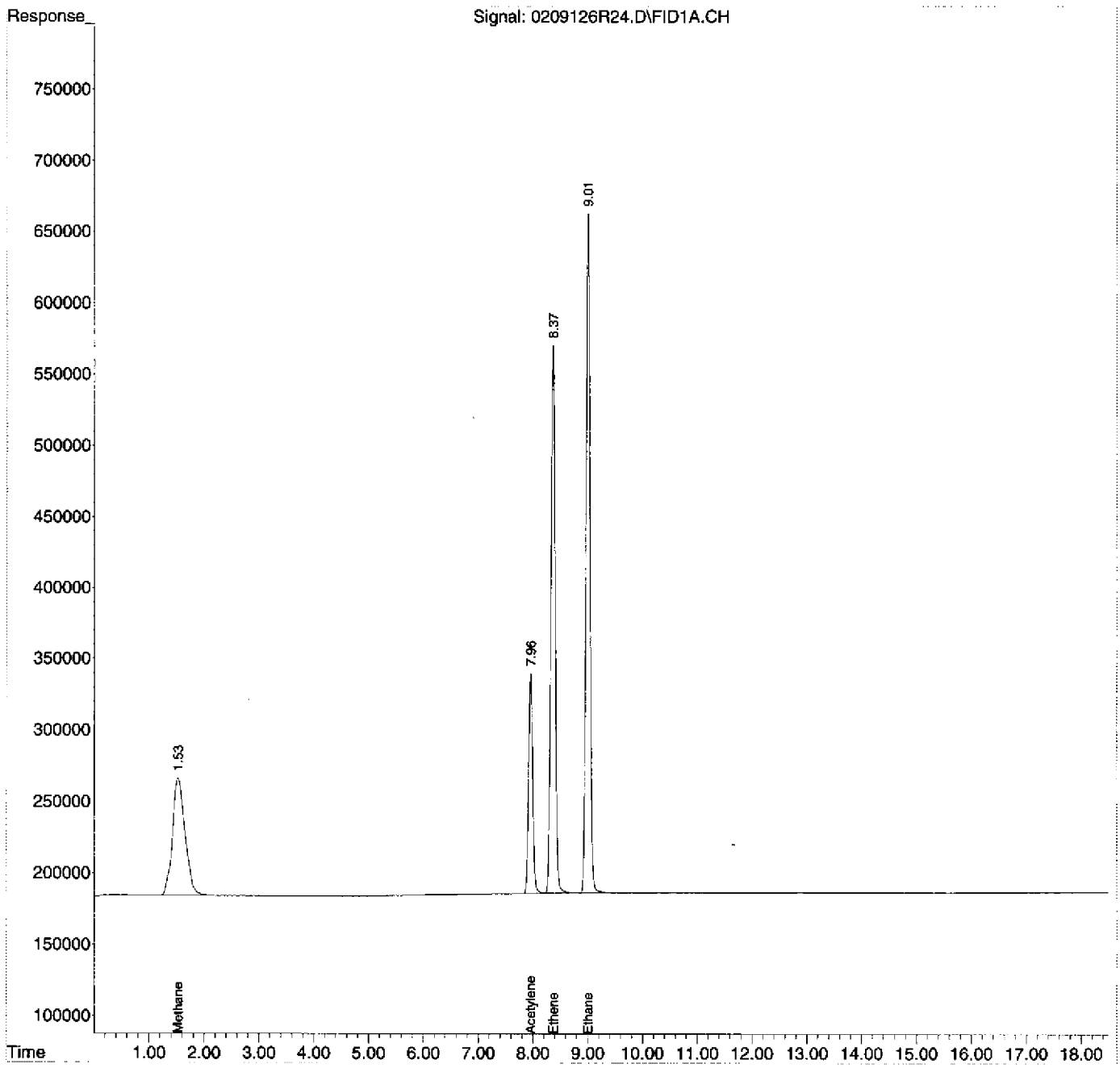
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\020912RSK\
Data File : 0209126R24.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 09 Feb 2012 11:24 pm
Operator : rh
Sample : 2020032-CCV3
Misc : 2B09005
ALS Vial : 24 Sample Multiplier: 1

Quant Time: Feb 10 08:40:13 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm



Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\020912RSK\
Data File : 0209126R25.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 09 Feb 2012 11:50 pm
Operator : rh
Sample : regular ib
Misc : 2B09005
ALS Vial : 25 Sample Multiplier: 1

Quant Time: Feb 10 08:40:21 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) S Acetylene	7.959	24123783	69.021 ug/L
Spiked Amount 66.330	Range 66 - 153	Recovery =	104.06%
Target Compounds			
1) TM Methane	1.537	673545	0.662 ug/L
3) TM Ethene	0.000	0	N.D. ug/L
4) TM Ethane	0.000	0	N.D. ug/L
5) Qual Propane	0.000	0	N.D.
6) Qual Butane	0.000	0	N.D.

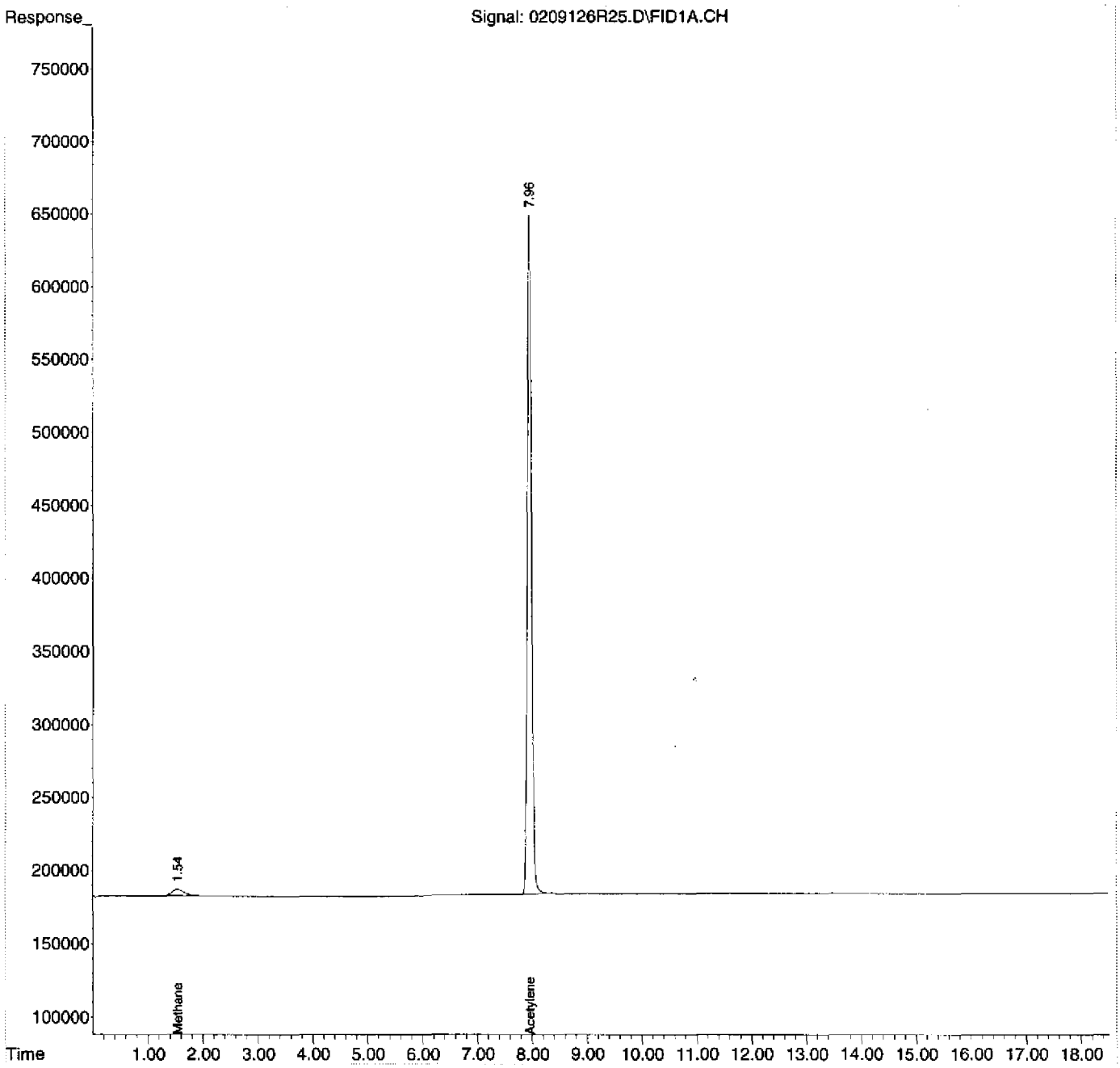
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\020912RSK\
Data File : 0209126R25.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 09 Feb 2012 11:50 pm
Operator : rh
Sample : regular ib
Misc : 2B09005
ALS Vial : 25 Sample Multiplier: 1

Quant Time: Feb 10 08:40:21 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm



Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\020912RSK\
Data File : 0209126R26.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 10 Feb 2012 12:25 am
Operator : rh
Sample : ib no surrogate
Misc : 2B09005
ALS Vial : 26 Sample Multiplier: 1

Quant Time: Feb 10 08:43:38 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
2) S Acetylene	0.000	0	N.D.	ug/L
Spiked Amount 66.330 Range 66 - 153	Recovery =	0.00%#		
Target Compounds				
1) TM Methane	1.535	293256	<MDL	ug/L m
3) TM Ethene	0.000	0	N.D.	ug/L
4) TM Ethane	0.000	0	N.D.	ug/L
5) Qual Propane	0.000	0	N.D.	
6) Qual Butane	0.000	0	N.D.	

(f)=RT Delta > 1/2 Window (m)=manual int.

Not used, diagnostic

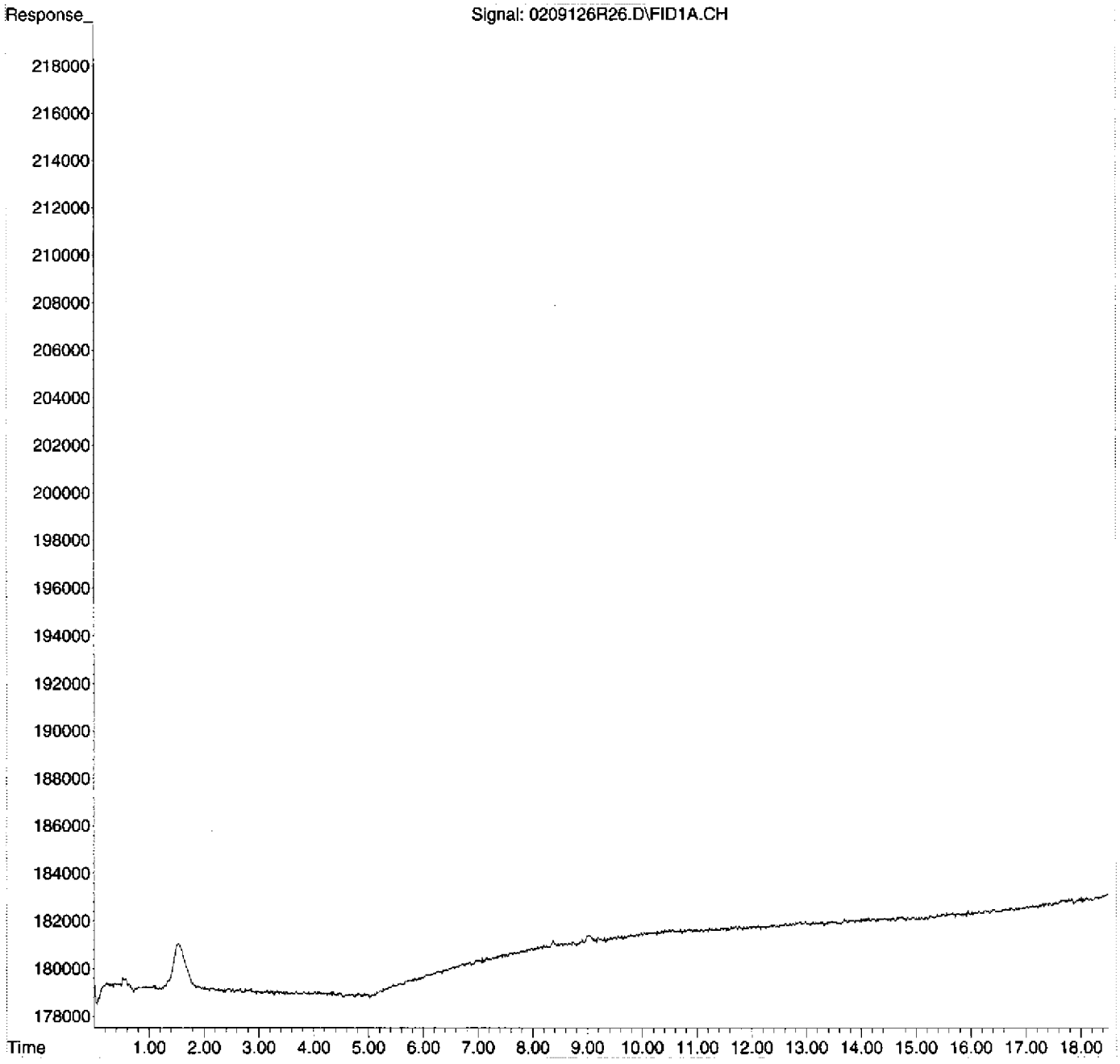
RH 2/10/12

Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\020912RSK\
Data File : 0209126R26.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 10 Feb 2012 12:25 am
Operator : rh
Sample : ib no surrogate
Misc : 2B09005
ALS Vial : 26 Sample Multiplier: 1

Quant Time: Feb 10 08:43:38 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm

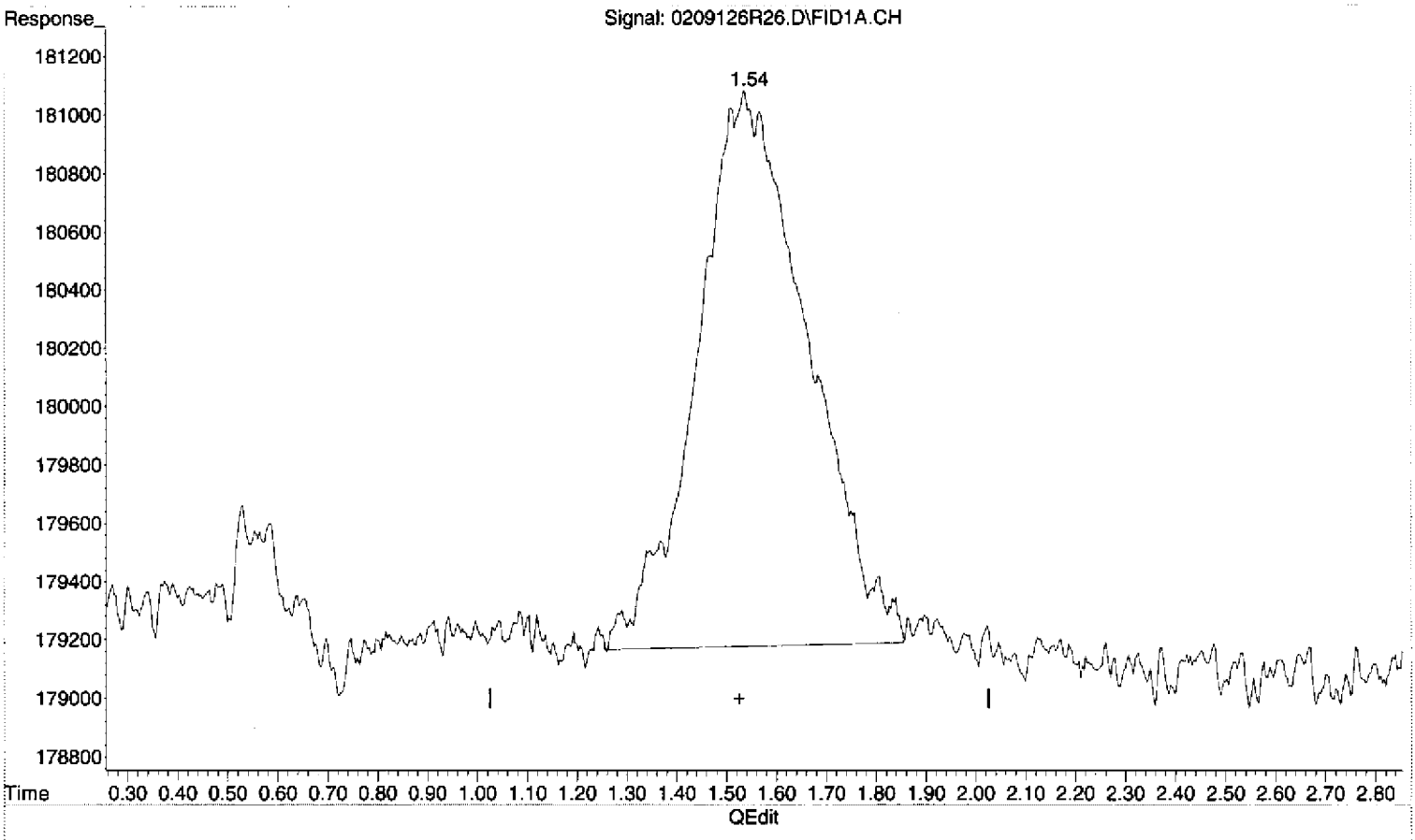


Quantitation Report (Qedit)

Data Path : D:\MSDCHEM\1\2012\DATA\020912RSK\
Data File : 0209126R26.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 10 Feb 2012 12:25 am
Operator : rh
Sample : ib no surrogate
Misc : 2B09005
ALS Vial : 26 Sample Multiplier: 1

Quant Time: Feb 10 08:43:38 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm



(1) Methane (TM)

1.54min 0.288ug/L m

response 293256

(+) = Expected Retention Time

01663

Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\020912RSK\
Data File : 0209126R27.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 10 Feb 2012 12:51 am
Operator : rh
Sample : empty He vial
Misc : 2B09005
ALS Vial : 27 Sample Multiplier: 1

Quant Time: Feb 10 08:44:13 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) S Acetylene	0.000	0	N.D. ug/L
Spiked Amount 66.330 Range 66 - 153	Recovery =	0.00%#	
Target Compounds			
1) TM Methane	1.545	318682	<MDL ug/L m
3) TM Ethene	0.000	0	N.D. ug/L
4) TM Ethane	0.000	0	N.D. ug/L
5) Qual Propane	0.000	0	N.D.
6) Qual Butane	0.000	0	N.D.

(f)=RT Delta > 1/2 Window (m)=manual int.

not used diagnostic.

RH 2/10/12

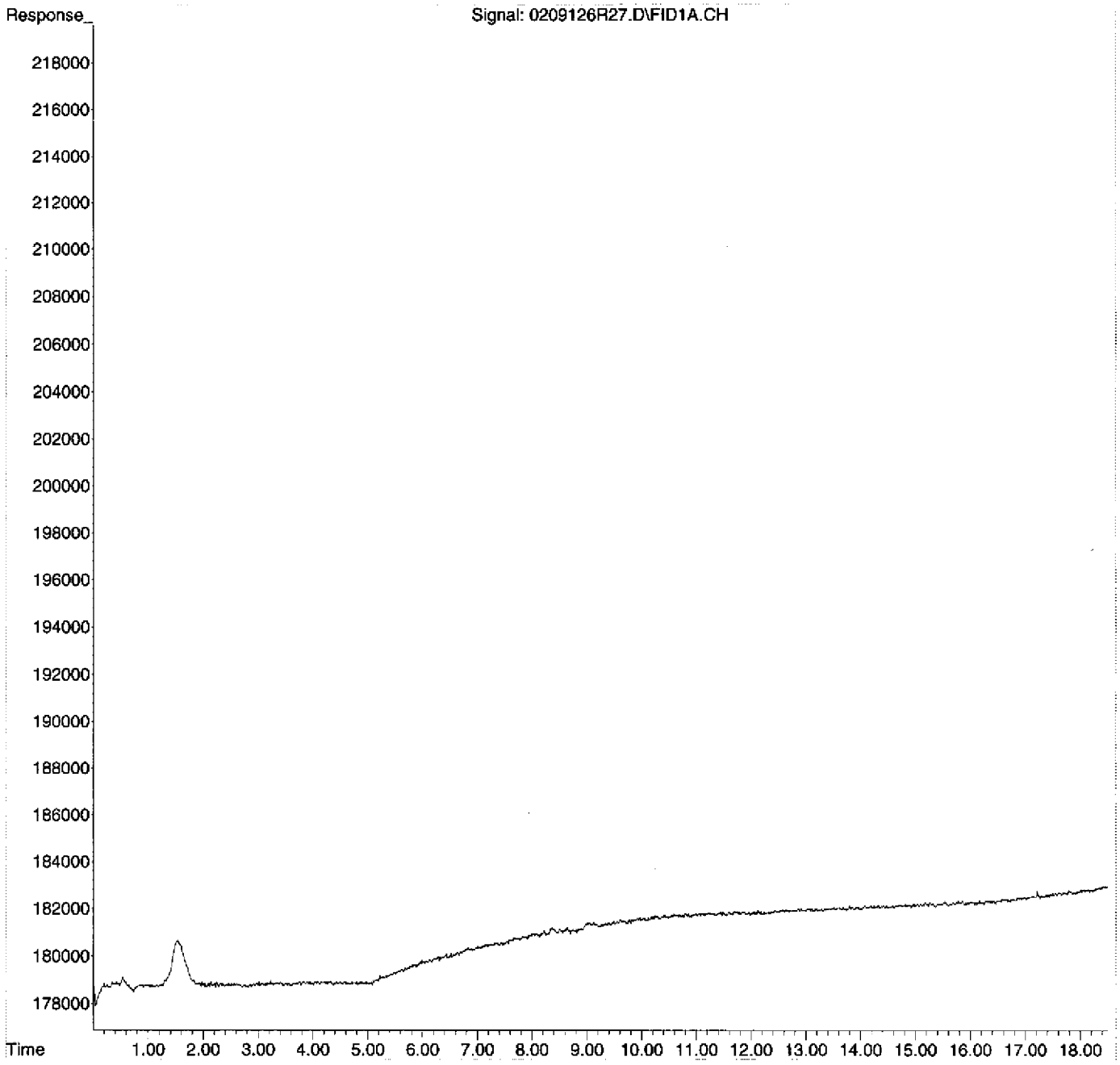
00155

Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\020912RSK\
Data File : 0209126R27.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 10 Feb 2012 12:51 am
Operator : rh
Sample : empty He vial
Misc : 2B09005
ALS Vial : 27 Sample Multiplier: 1

Quant Time: Feb 10 08:44:13 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm

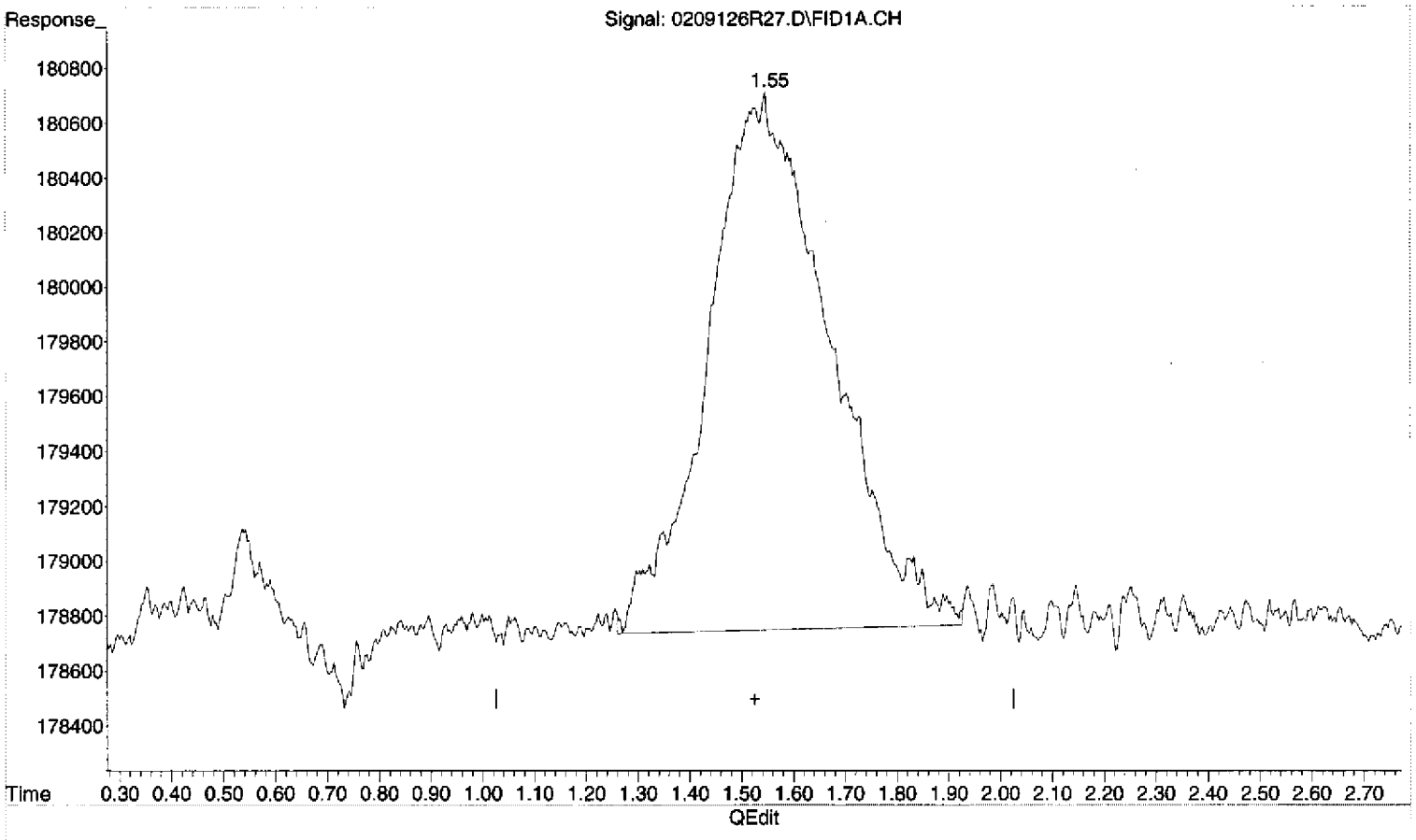


Quantitation Report (Qedit)

Data Path : D:\MSDCHEM\1\2012\DATA\020912RSK\
Data File : 0209126R27.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 10 Feb 2012 12:51 am
Operator : rh
Sample : empty He vial
Misc : 2B09005
ALS Vial : 27 Sample Multiplier: 1

Quant Time: Feb 10 08:44:03 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm



(1) Methane (TM)

1.55min 0.313ug/L m

response 318682

(+) = Expected Retention Time

01666

SDG: 12039A

Instrument: AG6890N-6

Analysis Date: 2/12/12

SAMPLE DATA

G:\USER\ESAT\1 Organic Group\Forms\DataPackageSeparators.doc

00157

Injection Log

Operator: rh
Directory: D:\MSDCHEM\1\2012\DATA\021212RSK\

Vial	File Name	Mult	Sample Info	Misc Info	Date Acquired
1	0212126R01.D	0	2020042-CCV1	2B12004	12 Feb 2012 11:34 am
2	0212126R02.D	0	2020042-LCV1	2B12002	12 Feb 2012 12:00 pm
3	0212126R03.D	0	2020042-LCV2	2B12003	12 Feb 2012 12:27 pm
4	0212126R04.D	0	B2B0053-BLK1	MB	12 Feb 2012 12:53 pm
5	0212126R05.D	0	B2B0053-BS1	LCS	12 Feb 2012 1:28 pm
6	0212126R06.D	0	1202023-02RE1	HW51 0.5ML	12 Feb 2012 1:55 pm
7	0212126R07.D	0	1202023-03RE1	HW51-P 0.5ML	12 Feb 2012 2:29 pm
8	0212126R08.D	0	1202023-05RE1	HW47 0.3ML	12 Feb 2012 2:56 pm
9	0212126R09.D	0	1202023-06RE1	HW47-P 0.3ML	12 Feb 2012 3:30 pm
10	0212126R10.D	0	1202031-03	TB31	12 Feb 2012 3:57 pm
11	0212126R11.D	0	1202031-06	TB32	12 Feb 2012 4:31 pm
12	0212126R12.D	0	1202031-09	TB33	12 Feb 2012 4:58 pm
13	0212126R13.D	0	1202031-12	TB34	12 Feb 2012 5:33 pm
14	0212126R14.D	0	1202031-01	HW48	12 Feb 2012 5:59 pm
15	0212126R15.D	0	1202031-02	HW48Z	12 Feb 2012 6:34 pm
16	0212126R16.D	0	1202031-04	HW23	12 Feb 2012 7:00 pm
17	0212126R17.D	0	1202031-05	HW23-P	12 Feb 2012 7:35 pm
18	0212126R18.D	0	1202031-07	HW21	12 Feb 2012 8:01 pm
19	0212126R19.D	0	1202031-08	HW21Z	12 Feb 2012 8:27 pm
20	0212126R20.D	0	1202031-10	HW22	12 Feb 2012 9:03 pm
21	0212126R21.D	0	1202031-11	HW22-P	12 Feb 2012 9:29 pm
22	0212126R22.D	0	IB	IB	12 Feb 2012 9:56 pm
23	0212126R23.D	0	GE BLANK 1/30/12	IB	12 Feb 2012 10:31 pm
24	0212126R24.D	0	2020042-CCV2	2B12004	12 Feb 2012 10:57 pm
25	0212126R25.D	0	2020042-CCV3	2B12004	12 Feb 2012 11:24 pm
26	0212126R26.D	0	IB	L13003 LOT#109-14-06128-I1	12 Feb 2012 11:59 pm
27	0212126R27.D	0	IB	12005 LOT#109-14-06393-I5	13 Feb 2012 12:25 am
28	0212126R28.D	0	IB	SYRINGE PUNCTURE NO SURR	13 Feb 2012 12:52 am

Response Factor Report AG6890N-6

Method Path : D:\MSDCHEM\1\2012\METHOD\
Method File : 0126126RSK.M
Title :
Last Update : Fri Jan 27 11:26:56 2012
Response Via : Initial Calibration

Calibration Files
1 =0126126R008.D 2 =0126126R007.D 3 =0126126R006.D
4 =0126126R005.D 5 =0126126R004.D 6 =0126126R003.D

	Compound	1	2	3	4	5	6	Avg		%RSD
1)	TM Methane		1.100	1.004	1.003	0.997	1.028	1.018	E6	4.25
2)	S Acetylene	3.221	3.304	3.380	3.710	3.595	3.697	3.495	E5	5.56
3)	TM Ethene	8.210	8.669	8.696	9.069	9.135	9.418	8.879	E5	4.42
4)	TM Ethane	0.894	0.941	0.956	0.986	0.994	1.023	0.967	E6	4.30
5)	Qual Propane							0.000		-1.00
6)	Qual Butane							0.000		-1.00

(#) = Out of Range ### Number of calibration levels exceeded format ###

GC QA-QC Check Report 01669

Daily Calibration File : D:\MSDCHEM\1\DATA\2010\120810RSK\120810A02.D
Time Acquired : 08 Dec 2010 11:12 am

File	Sample	Surrogate Recovery %
0212126R01.D	2020042-CCV1	35*
0212126R02.D	2020042-LCV1	1*
0212126R03.D	2020042-LCV2	3*
0212126R04.D	B2B0053-BLK1	114
0212126R05.D	B2B0053-BS1	119
0212126R06.D	1202023-02RE1	117
0212126R07.D	1202023-03RE1	116
0212126R08.D	1202023-05RE1	118
0212126R09.D	1202023-06RE1	115
0212126R10.D	1202031-03	116
0212126R11.D	1202031-06	113
0212126R12.D	1202031-09	119
0212126R13.D	1202031-12	116
0212126R14.D	1202031-01	115
0212126R15.D	1202031-02	114
0212126R16.D	1202031-04	115
0212126R17.D	1202031-05	113
0212126R18.D	1202031-07	116
0212126R19.D	1202031-08	115
0212126R20.D	1202031-10	106
0212126R21.D	1202031-11	100
0212126R22.D	IB	119
0212126R23.D	STORAGE BLANK	108
0212126R24.D	2020042-CCV2	36*
0212126R25.D	2020042-CCV3	36*
0212126R26.D	IB	110
0212126R27.D	IB	116
0212126R28.D	IB	0*

(fails) - fails 24hr time check * - fails criteria

00160

Evaluate Continuing Calibration Report

Data Path : D:\MSDCHEM\1\2012\DATA\021212RSK\
Data File : 0212126R01.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 12 Feb 2012 11:34 am
Operator : rh
Sample : 2020042-CCV1
Misc : 2B12004
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Feb 13 09:52:13 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
1 TM	Methane	1.018	1.127 E6	-10.7	112	0.00
2 S	Acetylene	349.516	375.221 E3	-7.4	101	-0.03
3 TM	Ethene	887.936	1009.244 E3	-13.7	111	0.00
4 TM	Ethane	966.567	1109.716 E3	-14.8	113	0.00

Evaluate Continuing Calibration Report - Not Founds

5	QualPropane	0.000	0.000	0.0	0#	-12.89#
6	QualButane	0.000	0.000	0.0	0#	-17.72#

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\021212RSK\
Data File : 0212126R01.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 12 Feb 2012 11:34 am
Operator : rh
Sample : 2020042-CCV1
Misc : 2B12004
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Feb 13 09:52:13 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) S Acetylene	7.947	8123524	23.242 ug/L
Spiked Amount 66.330 Range 66 - 153		Recovery =	35.04%#
Target Compounds			
1) TM Methane	1.525	14916623	14.652 ug/L
3) TM Ethene	8.367	23671814	26.659 ug/L
4) TM Ethane	9.007	27721813	28.681 ug/L
5) Qual Propane	0.000	0	N.D.
6) Qual Butane	0.000	0	N.D.

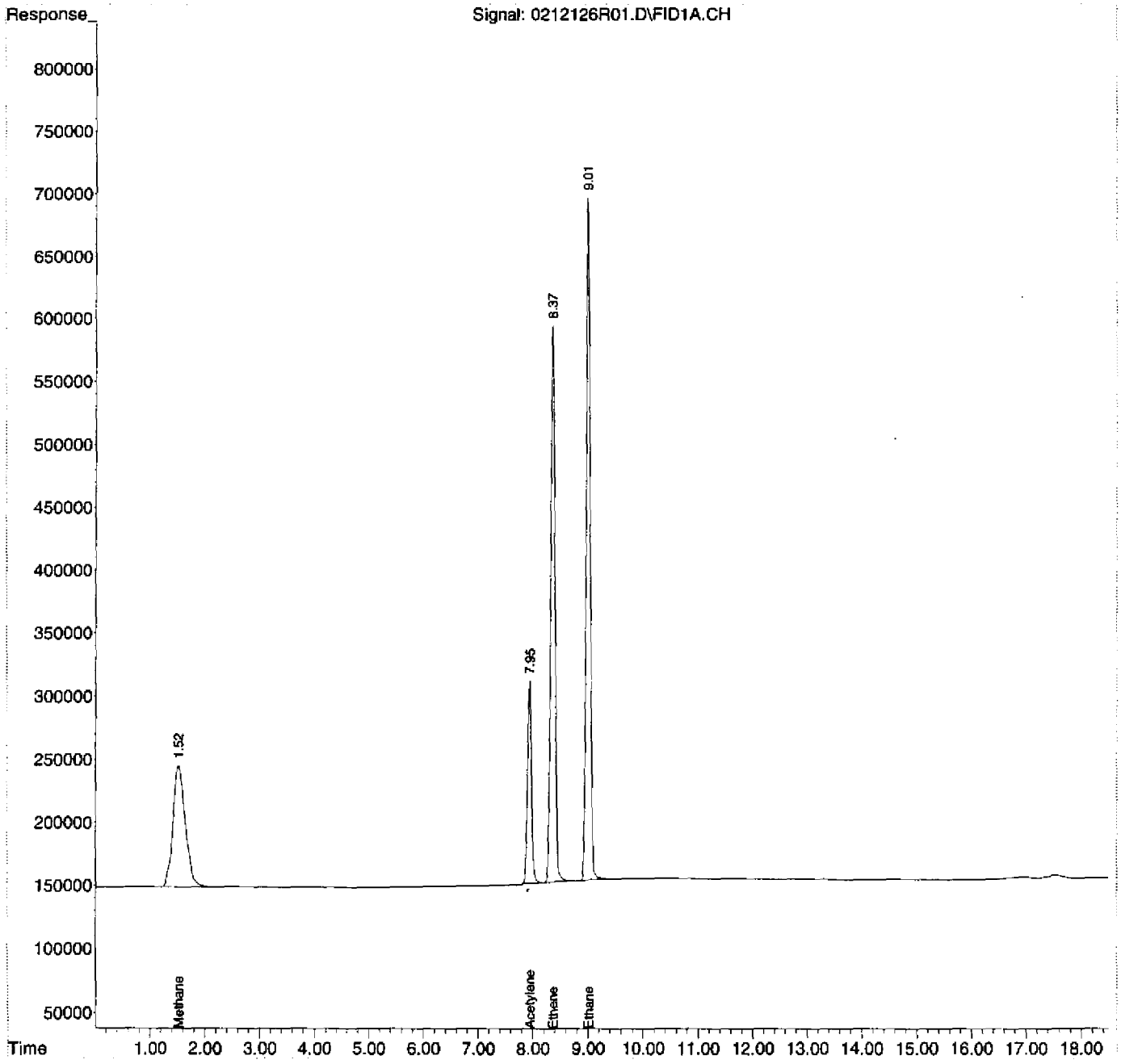
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\021212RSK\
Data File : 0212126R01.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 12 Feb 2012 11:34 am
Operator : rh
Sample : 2020042-CCV1
Misc : 2B12004
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Feb 13 09:52:13 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm



RSK-175 HC LCV REPORT

Instrument Name: AG6890N-6
File Name LCV1: 0212126R02
File Name LCV2: 0212126R03
Date Acquired: 02/12/12
Operator: rh

Analyte	Spike ug/L	Calculated ug/L	QC Limits	%R	Status
Methane	1.231	1.414	60 - 140	114.9%	pass
Acetylene	2.014	1.882	60 - 140	93.4%	NA
Ethene	1.091	1.078	60 - 140	98.8%	pass
Ethane	1.162	1.156	60 - 140	99.5%	pass

Ethene & ethane recovery calculated from LCV1 results
Methane recovery calculated from LCV2 results

Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\021212RSK\
Data File : 0212126R02.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 12 Feb 2012 12:00 pm
Operator : rh
Sample : 2020042-LCV1
Misc : 2B12002
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Feb 13 09:52:21 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) S Acetylene	7.967	342594	0.980 ug/L
Spiked Amount 66.330	Range 66 - 153	Recovery =	1.48%#
Target Compounds			
1) TM Methane	1.526	936315	0.920 ug/L
3) TM Ethene	8.371	957545	1.078 ug/L
4) TM Ethane	9.010	1117284	1.156 ug/L
5) Qual Propane	0.000	0	N.D.
6) Qual Butane	0.000	0	N.D.

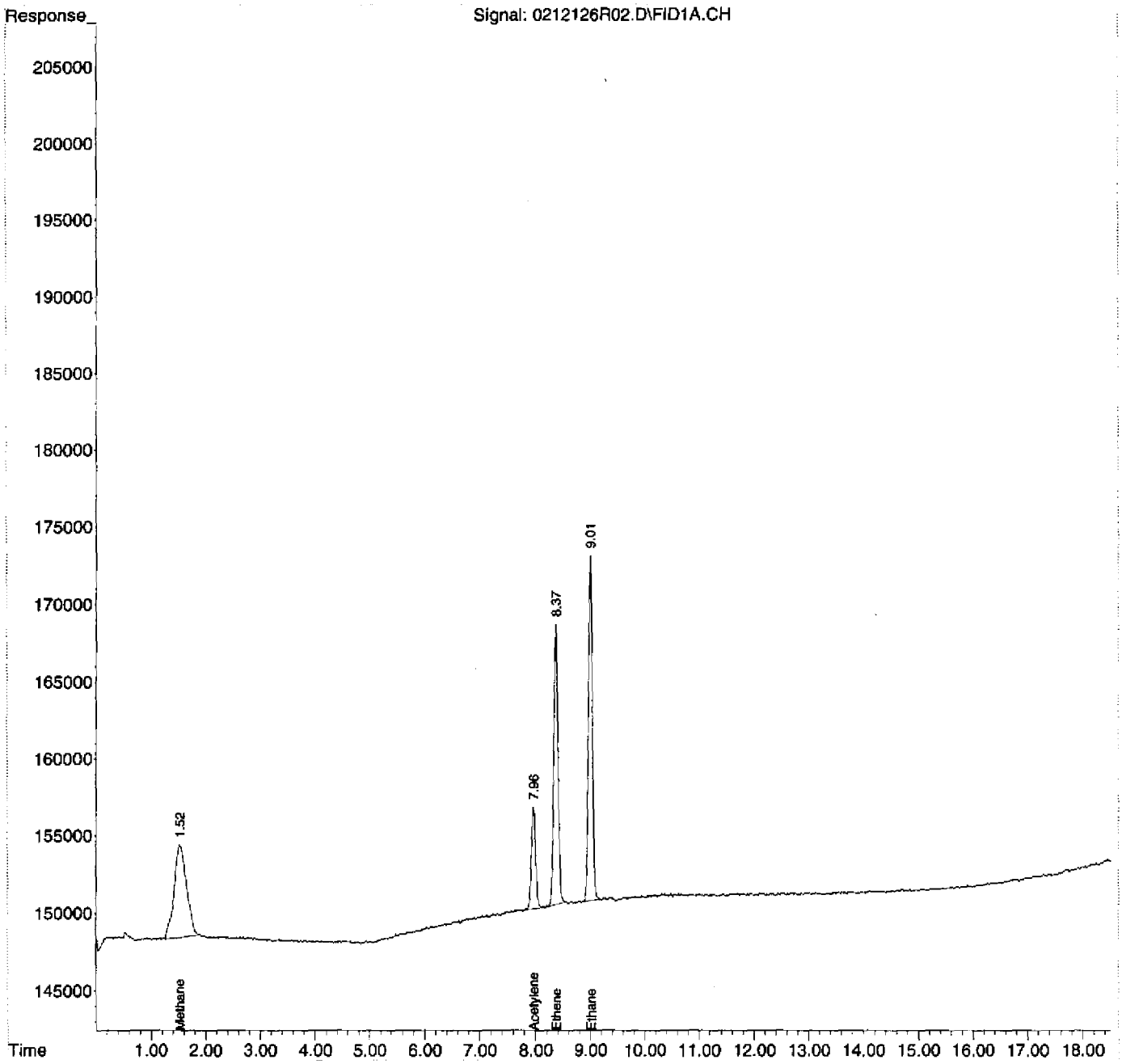
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\021212RSK\
Data File : 0212126R02.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 12 Feb 2012 12:00 pm
Operator : rh
Sample : 2020042-LCV1
Misc : 2B12002
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Feb 13 09:52:21 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm



Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\021212RSK\
Data File : 0212126R03.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 12 Feb 2012 12:27 pm
Operator : rh
Sample : 2020042-LCV2
Misc : 2B12003
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Feb 13 09:52:29 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) S Acetylene	7.967	657669	1.882 ug/L
Spiked Amount 66.330 Range 66 - 153		Recovery =	2.84%#
Target Compounds			
1) TM Methane	1.527	1439522	1.414 ug/L
3) TM Ethene	8.372	1861612	2.097 ug/L
4) TM Ethane	9.010	2184513	2.260 ug/L
5) Qual Propane	0.000	0	N.D.
6) Qual Butane	0.000	0	N.D.

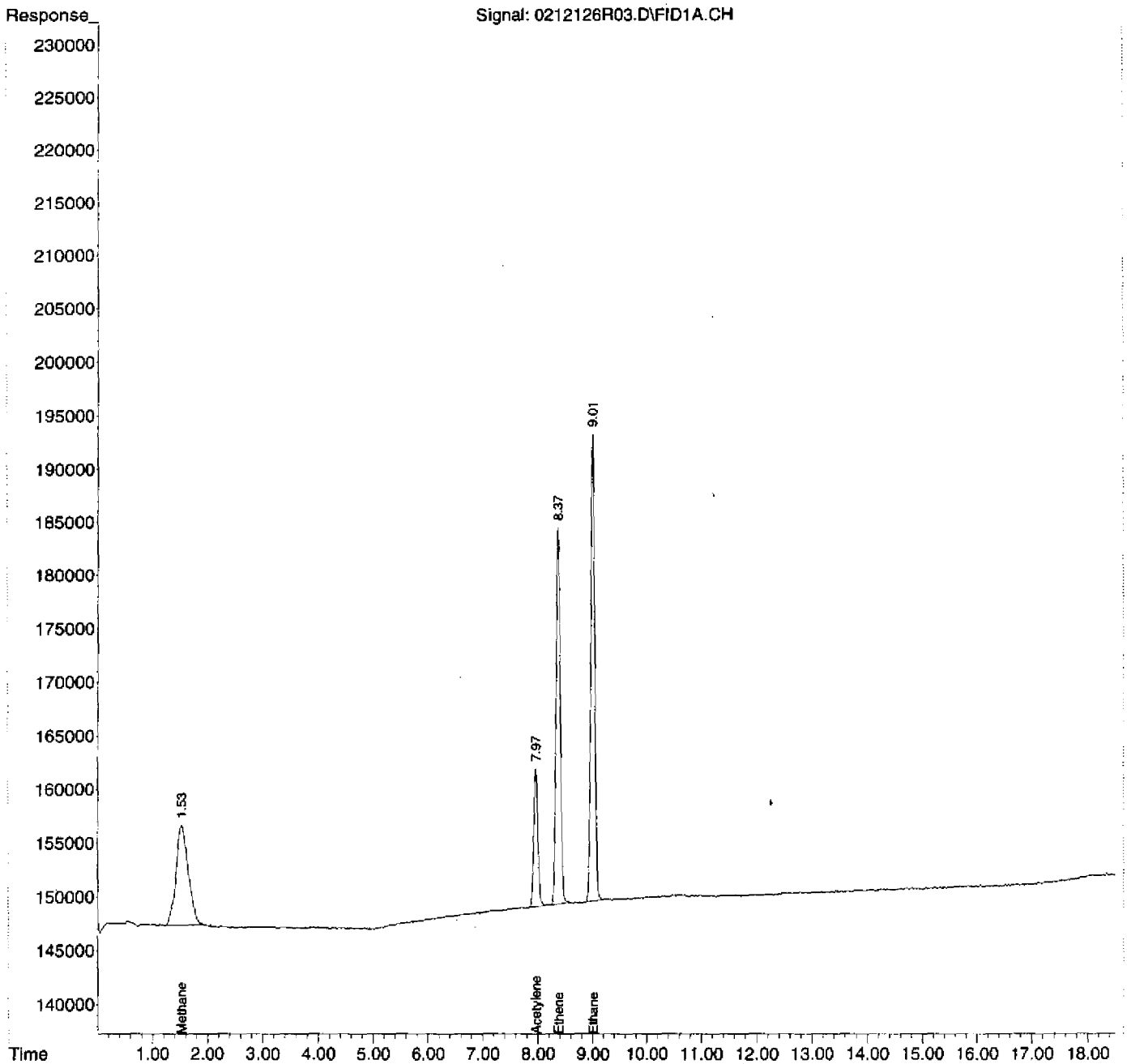
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\021212RSK\
Data File : 0212126R03.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 12 Feb 2012 12:27 pm
Operator : rh
Sample : 2020042-LCV2
Misc : 2B12003
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Feb 13 09:52:29 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm



DIM0279563

DIM0279368

Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\021212RSK\
Data File : 0212126R04.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 12 Feb 2012 12:53 pm
Operator : rh
Sample : B2B0053-BLK1
Misc : MB
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Feb 13 09:52:37 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) S Acetylene	7.959	26540686	75.936 ug/L
Spiked Amount 66.330 Range 66 - 153		Recovery =	114.48%
Target Compounds			
1) TM Methane	1.532	738551	0.725 ug/L
3) TM Ethene	8.351	47419	<MDL ug/L
4) TM Ethane	0.000	0	N.D. ug/L
5) Qual Propane	0.000	0	N.D.
6) Qual Butane	0.000	0	N.D.

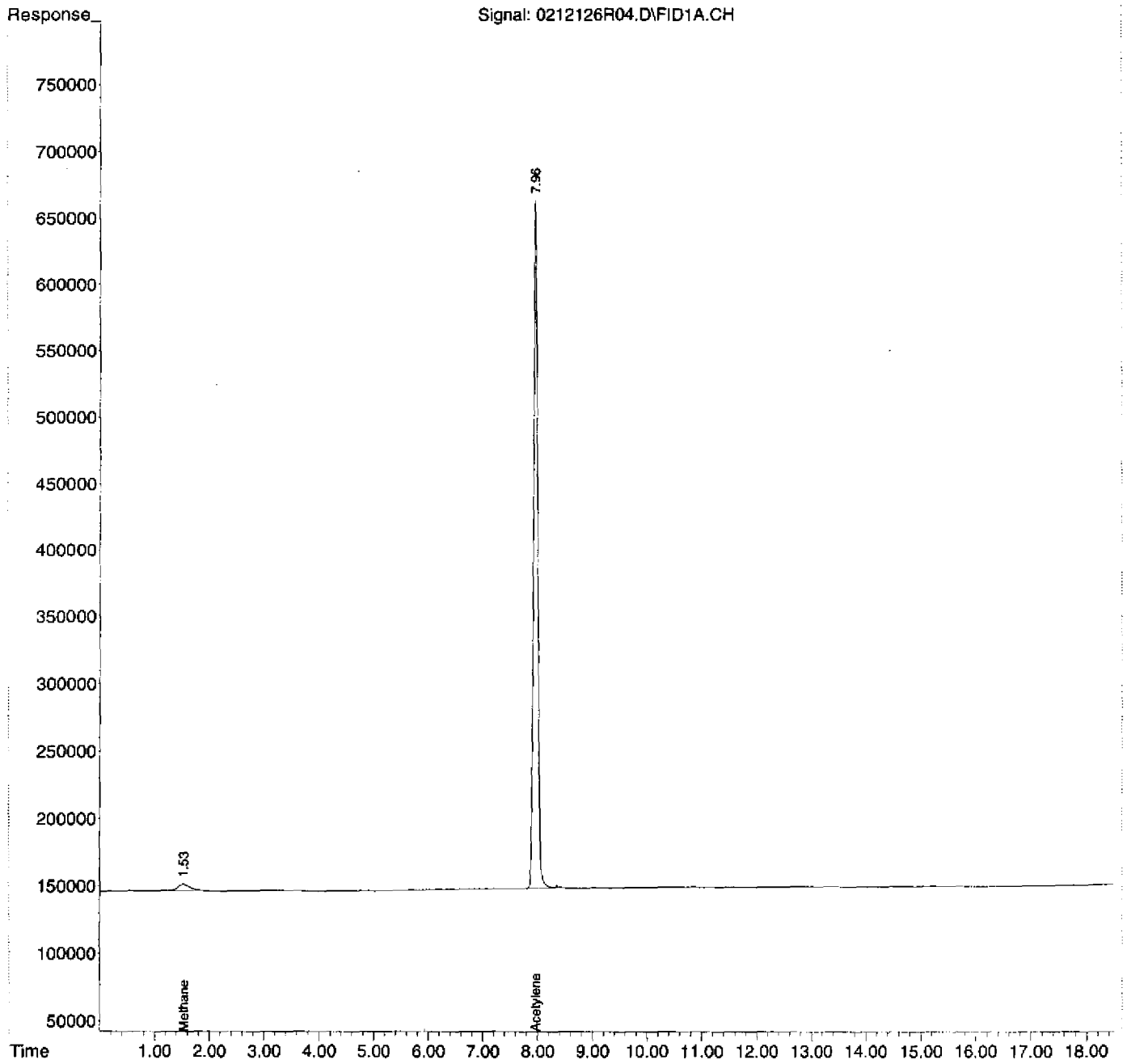
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\021212RSK\
Data File : 0212126R04.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 12 Feb 2012 12:53 pm
Operator : rh
Sample : B2B0053-BLK1
Misc : MB
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Feb 13 09:52:37 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm



RSK-175 LCSSUMMARY REPORT

Instrument Name: AG6890N-6
File Name: 0212126R05.D
Date Acquired: 2/12/2012
Operator: rh

Analyte	Spike ug/L	Calculated ug/L	QC Limits	%R	Status
Methane	44.099	47.023	70-130	106.6%	pass
Acetylene	72.166	78.901	66.4-153	109.3%	pass
Ethene	78.183	87.025	78-138	111.3%	pass
Ethane	83.269	92.926	77-137	111.6%	pass

Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\021212RSK\
Data File : 0212126R05.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 12 Feb 2012 1:28 pm
Operator : rh
Sample : B2B0053-BS1
Misc : LCS
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Feb 13 09:52:45 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) S Acetylene	7.957	27577097	78.901 ug/L
Spiked Amount 66.330 Range 66 - 153		Recovery =	118.95%
Target Compounds			
1) TM Methane	1.528	47871095	47.023 ug/L
3) TM Ethene	8.368	77272905	87.025 ug/L
4) TM Ethane	9.005	89819609	92.926 ug/L
5) Qual Propane	0.000	0	N.D.
6) Qual Butane	0.000	0	N.D.

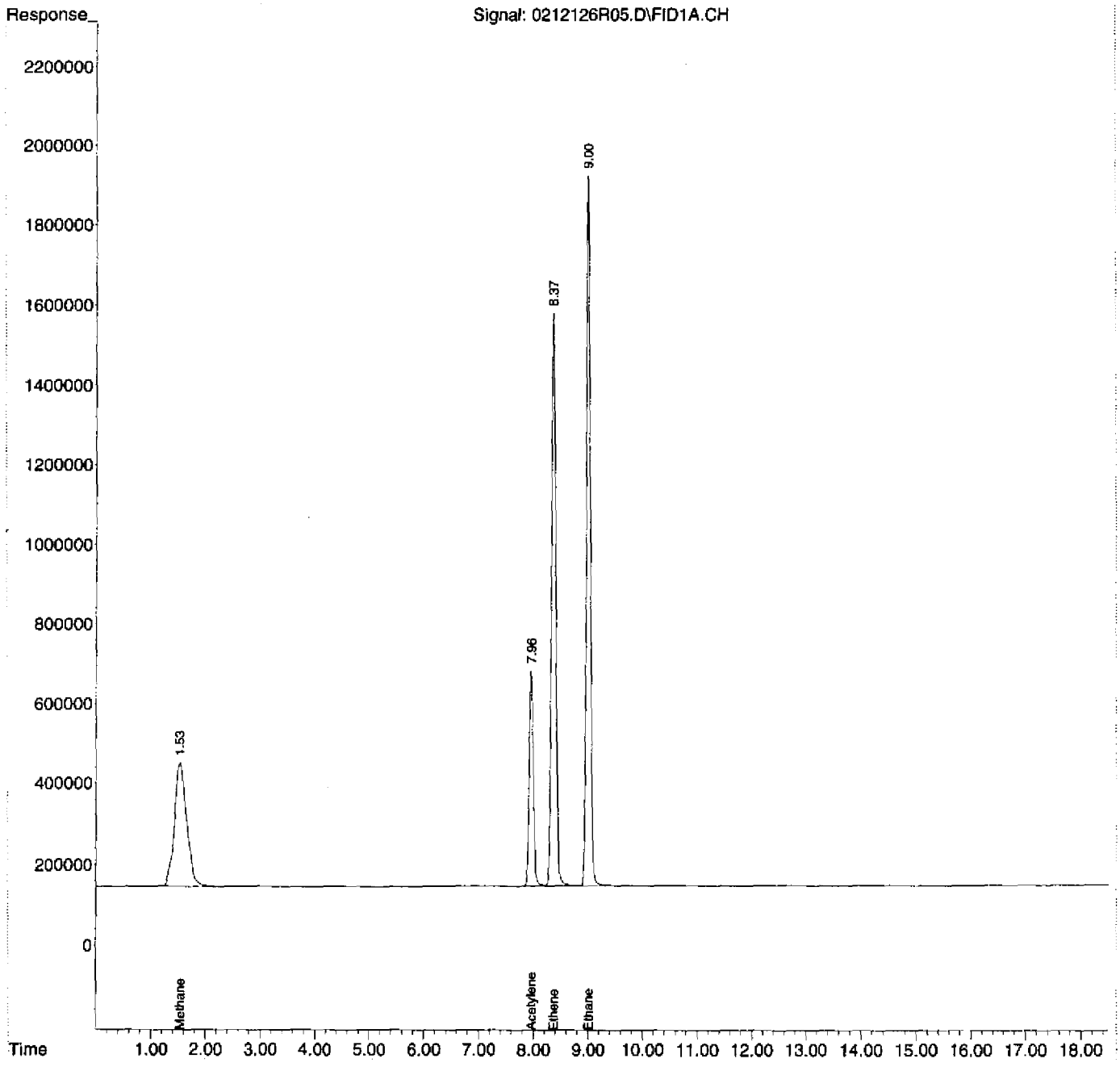
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\021212RSK\
Data File : 0212126R05.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 12 Feb 2012 1:28 pm
Operator : rh
Sample : B2B0053-BS1
Misc : LCS
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Feb 13 09:52:45 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm



Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\021212RSK\
Data File : 0212126R06.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 12 Feb 2012 1:55 pm
Operator : rh
Sample : 1202023-02RE1
Misc : HW51 0.5ML
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Feb 13 09:52:53 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) S Acetylene	7.958	27217668	77.872 ug/L
Spiked Amount 66.330 Range 66 - 153		Recovery =	117.40%
Target Compounds			
1) TM Methane	1.527	108970641	107.041 ug/L
3) TM Ethene	0.000	0	N.D. ug/L
4) TM Ethane	9.008	3030961	3.136 ug/L
5) Qual Propane	0.000	0	N.D.
6) Qual Butane	0.000	0	N.D.

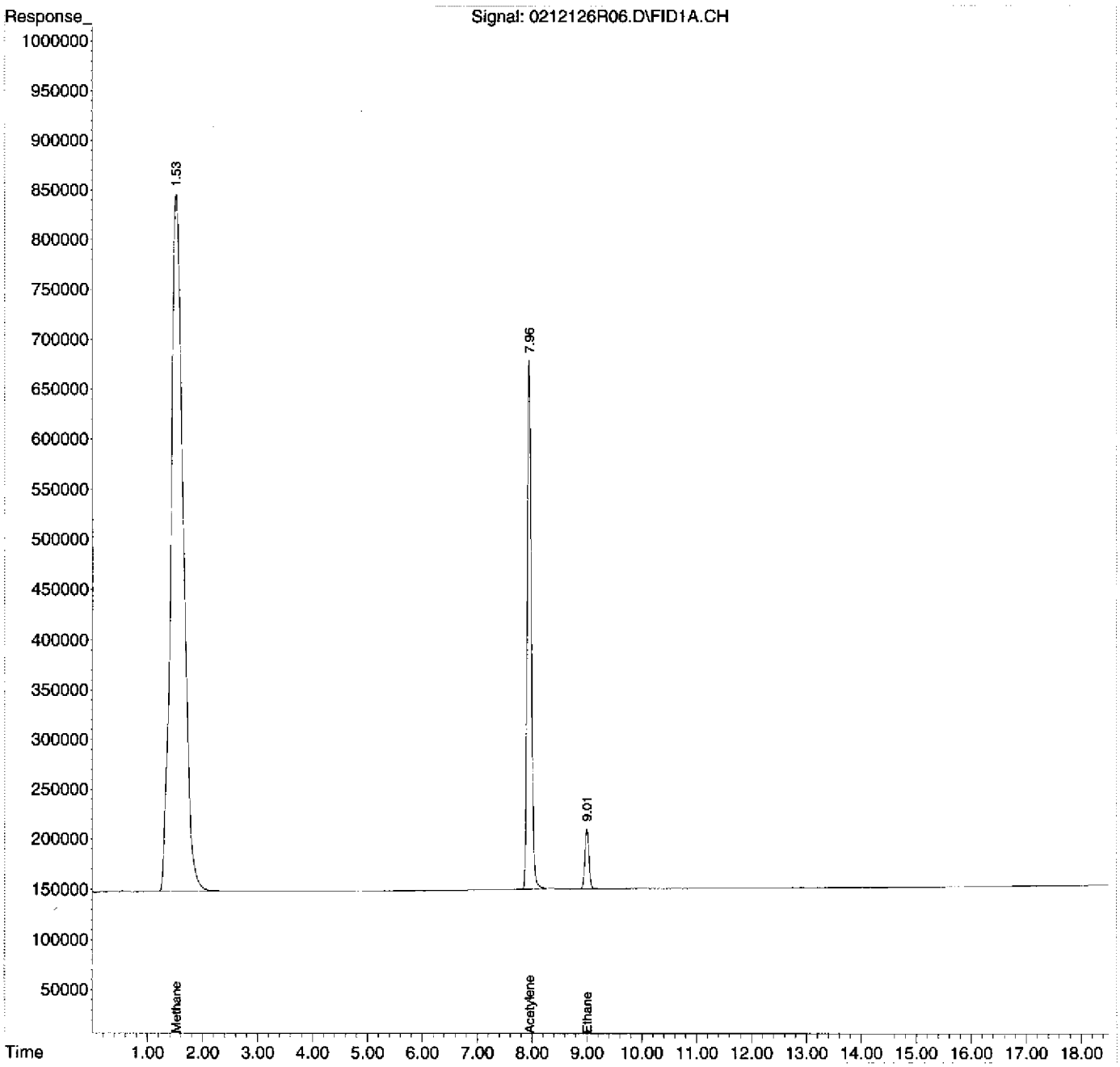
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\021212RSK\
Data File : 0212126R06.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 12 Feb 2012 1:55 pm
Operator : rh
Sample : 1202023-02RE1
Misc : HW51 0.5ML
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Feb 13 09:52:53 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm



Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\021212RSK\
Data File : 0212126R07.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 12 Feb 2012 2:29 pm
Operator : rh
Sample : 1202023-03RE1
Misc : HW51-P 0.5ML
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Feb 13 09:53:01 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) S Acetylene	7.957	26822289	76.741 ug/L
Spiked Amount 66.330 Range 66 - 153		Recovery =	115.70%
Target Compounds			
1) TM Methane	1.527	176555291	173.429 ug/L
3) TM Ethene	0.000	0	N.D. ug/L
4) TM Ethane	9.009	4701835	4.864 ug/L
5) Qual Propane	0.000	0	N.D.
6) Qual Butane	0.000	0	N.D.

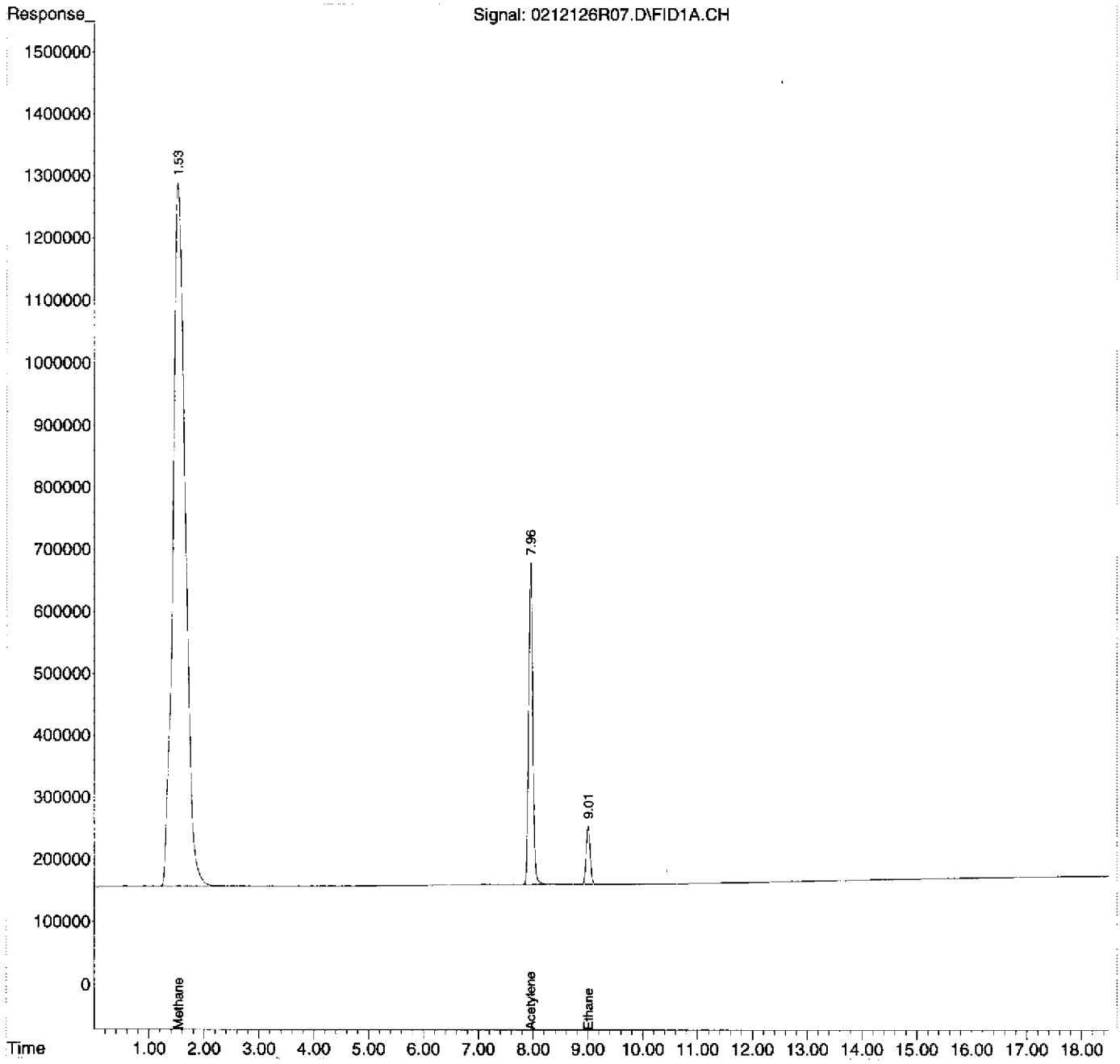
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\021212RSK\
Data File : 0212126R07.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 12 Feb 2012 2:29 pm
Operator : rh
Sample : 1202023-03RE1
Misc : HW51-P 0.5ML
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Feb 13 09:53:01 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm



Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\021212RSK\
Data File : 0212126R08.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 12 Feb 2012 2:56 pm
Operator : rh
Sample : 1202023-05RE1
Misc : HW47 0.3ML
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Feb 13 09:53:09 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) S Acetylene	7.958	27396657	78.385 ug/L
Spiked Amount 66.330 Range 66 - 153		Recovery =	118.17%
Target Compounds			
1) TM Methane	1.528	149849719	147.196 ug/L
3) TM Ethene	0.000	0	N.D. ug/L
4) TM Ethane	0.000	0	N.D. ug/L
5) Qual Propane	0.000	0	N.D.
6) Qual Butane	0.000	0	N.D.

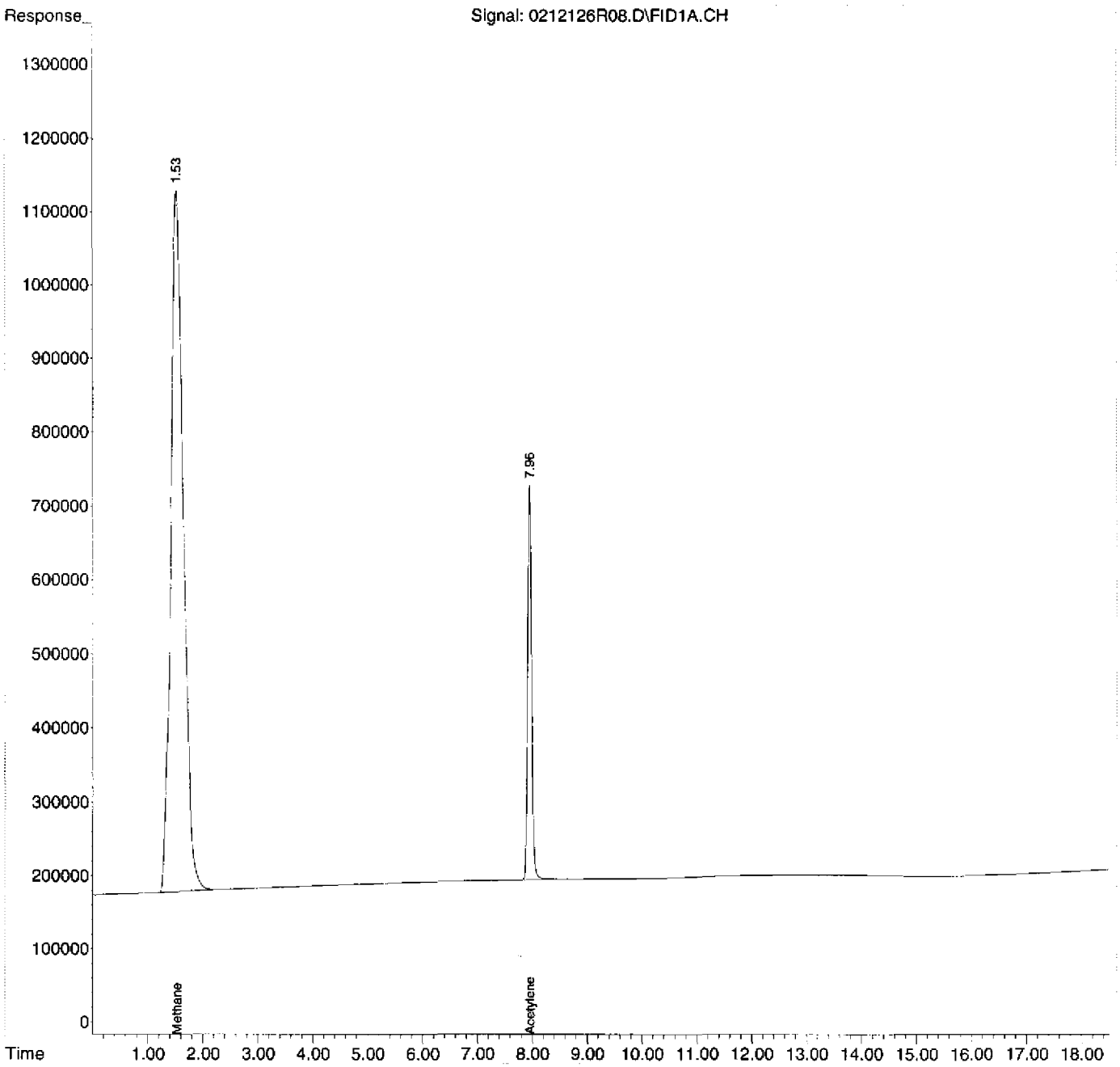
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\021212RSK\
Data File : 0212126R08.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 12 Feb 2012 2:56 pm
Operator : rh
Sample : 1202023-05RE1
Misc : HW47 0.3ML
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Feb 13 09:53:09 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm



Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\021212RSK\
Data File : 0212126R09.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 12 Feb 2012 3:30 pm
Operator : rh
Sample : 1202023-06RE1
Misc : HW47-P 0.3ML
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Feb 13 09:53:17 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) S Acetylene	7.957	26665767	76.293 ug/L
Spiked Amount 66.330 Range 66 - 153		Recovery =	115.02%
Target Compounds			
1) TM Methane	1.527	193832167	190.399 ug/L
3) TM Ethene	0.000	0	N.D. ug/L
4) TM Ethane	0.000	0	N.D. ug/L
5) Qual Propane	0.000	0	N.D.
6) Qual Butane	0.000	0	N.D.

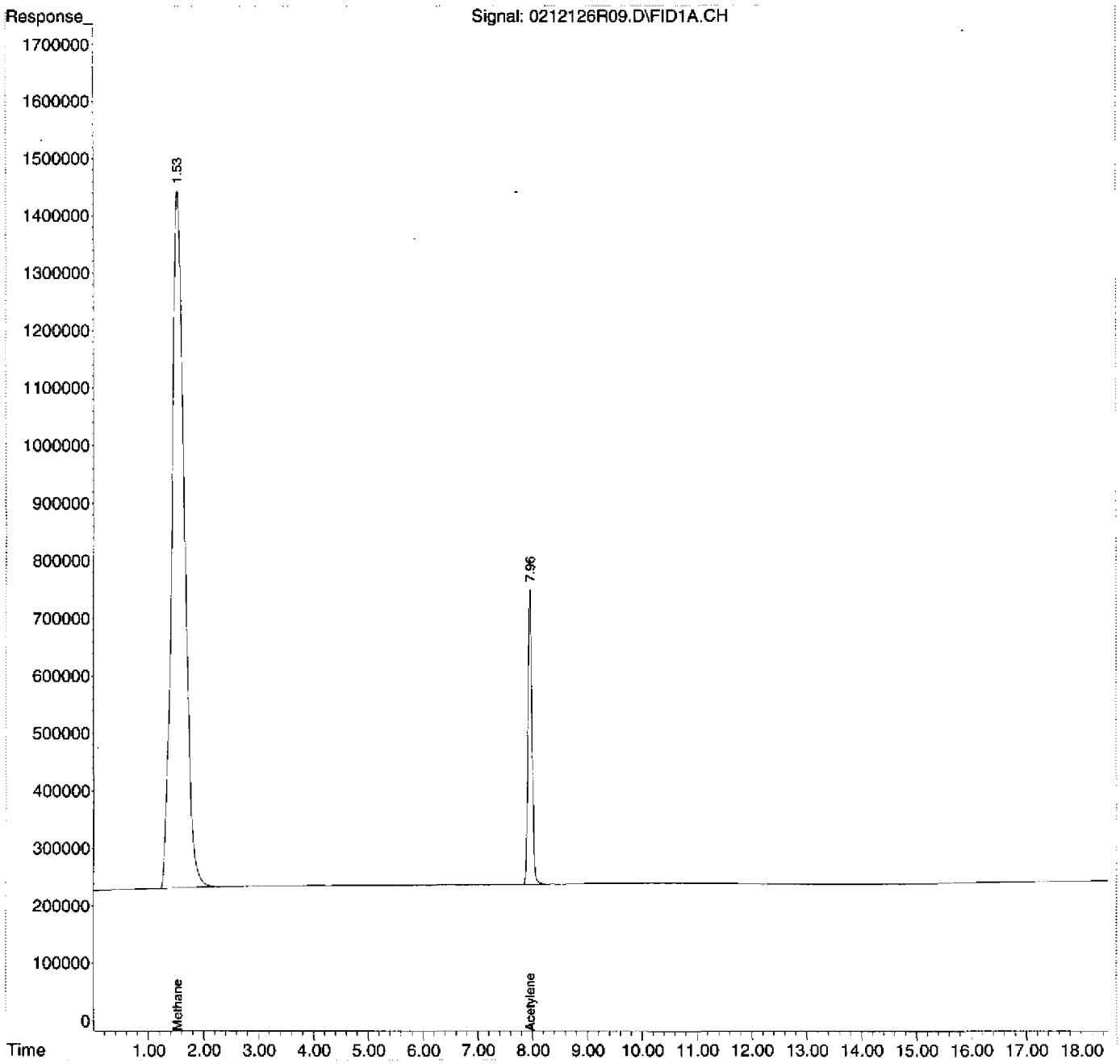
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\021212RSK\
Data File : 0212126R09.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 12 Feb 2012 3:30 pm
Operator : rh
Sample : 1202023-06RE1
Misc : HW47-P 0.3ML
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Feb 13 09:53:17 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm



Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\021212RSK\
Data File : 0212126R22.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 12 Feb 2012 9:56 pm
Operator : rh
Sample : IB
Misc : IB
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Feb 13 09:55:01 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) S Acetylene	7.957	27616490	79.014 ug/L
Spiked Amount 66.330 Range 66 - 153		Recovery =	119.12%
Target Compounds			
1) TM Methane	1.538	1553936	1.526 ug/L
3) TM Ethene	0.000	0	N.D. ug/L
4) TM Ethane	0.000	0	N.D. ug/L
5) Qual Propane	0.000	0	N.D.
6) Qual Butane	0.000	0	N.D.

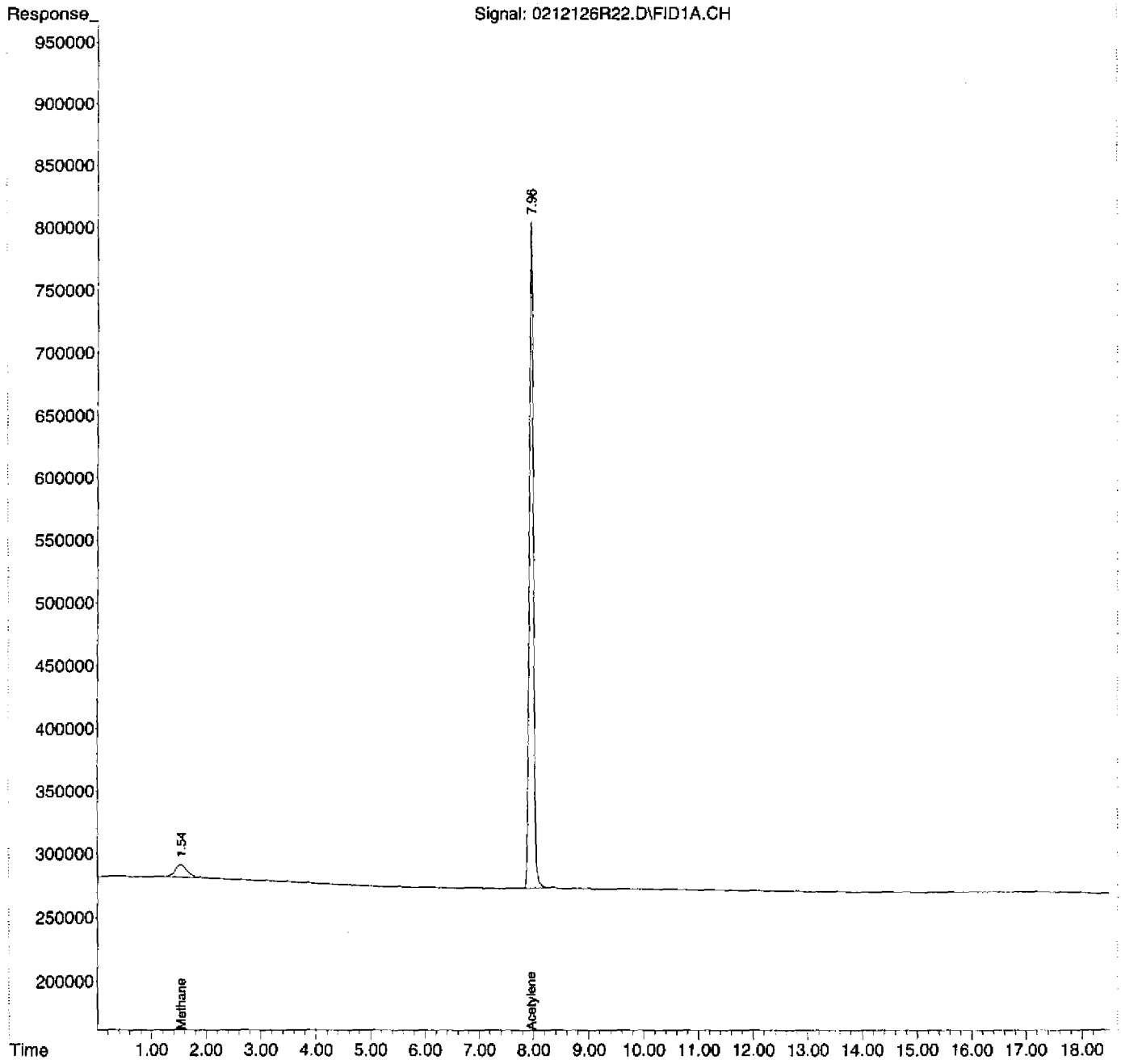
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\021212RSK\
Data File : 0212126R22.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 12 Feb 2012 9:56 pm
Operator : rh
Sample : IB
Misc : IB
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Feb 13 09:55:01 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm



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Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\021212RSK\
Data File : 0212126R23.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 12 Feb 2012 10:31 pm
Operator : rh
Sample : STORAGE BLANK 1/30/12
Misc : IB
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Feb 13 09:55:09 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) S Acetylene	7.958	25113621	71.853 ug/L
Spiked Amount 66.330 Range 66 - 153		Recovery =	108.33%
Target Compounds			
1) TM Methane	1.525	1542514	1.515 ug/L - hit.
3) TM Ethene	0.000	0	N.D. ug/L
4) TM Ethane	0.000	0	N.D. ug/L
5) Qual Propane	0.000	0	N.D.
6) Qual Butane	0.000	0	N.D.

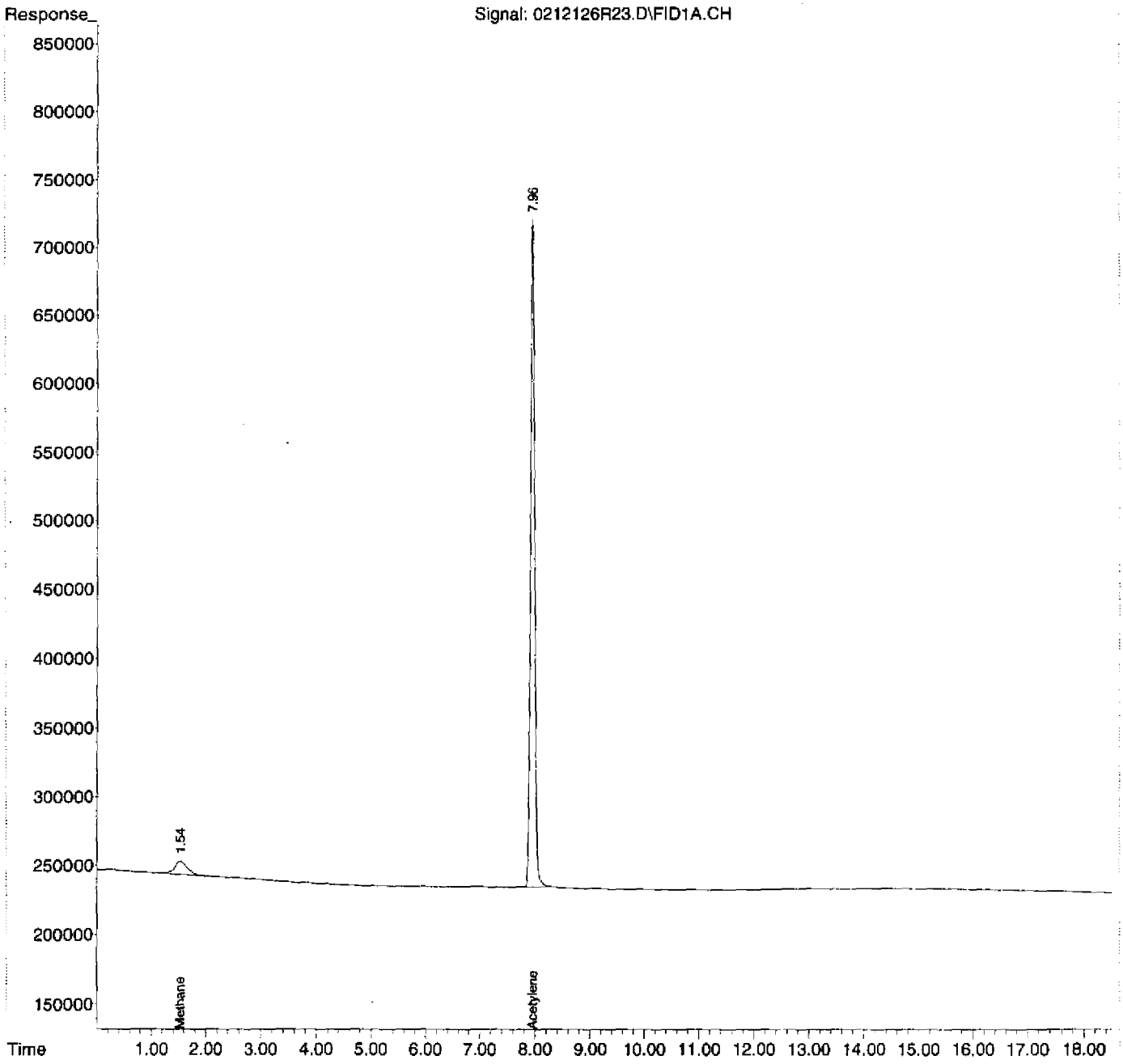
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\021212RSK\
Data File : 0212126R23.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 12 Feb 2012 10:31 pm
Operator : rh
Sample : STORAGE BLANK 1/30/12
Misc : IB
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Feb 13 09:55:09 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm



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Evaluate Continuing Calibration Report

Data Path : D:\MSDCHEM\1\2012\DATA\021212RSK\
Data File : 0212126R24.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 12 Feb 2012 10:57 pm
Operator : rh
Sample : 2020042-CCV2
Misc : 2B12004
ALS Vial : 24 Sample Multiplier: 1

Quant Time: Feb 13 09:55:17 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
1 TM	Methane	1.018	1.114 E6	-9.4	111	0.00
2 S	Acetylene	349.516	382.895 E3	-9.6	103	-0.02
3 TM	Ethene	887.936	990.622 E3	-11.6	109	0.00
4 TM	Ethane	966.567	1083.573 E3	-12.1	110	0.01

Evaluate Continuing Calibration Report - Not Founds

5	QualPropane	0.000	0.000	0.0	0#	-12.89#
6	QualButane	0.000	0.000	0.0	0#	-17.72#

(#) = Out of Range SPCC's out = 0 CCC's out = 0

00186

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Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\021212RSK\
Data File : 0212126R24.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 12 Feb 2012 10:57 pm
Operator : rh
Sample : 2020042-CCV2
Misc : 2B12004
ALS Vial : 24 Sample Multiplier: 1

Quant Time: Feb 13 09:55:17 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) S Acetylene	7.962	8289676	23.718 ug/L
Spiked Amount 66.330 Range 66 - 153		Recovery =	35.76%#
Target Compounds			
1) TM Methane	1.528	14739588	14.479 ug/L
3) TM Ethene	8.370	23235050	26.167 ug/L
4) TM Ethane	9.009	27068732	28.005 ug/L
5) Qual Propane	0.000	0	N.D.
6) Qual Butane	0.000	0	N.D.

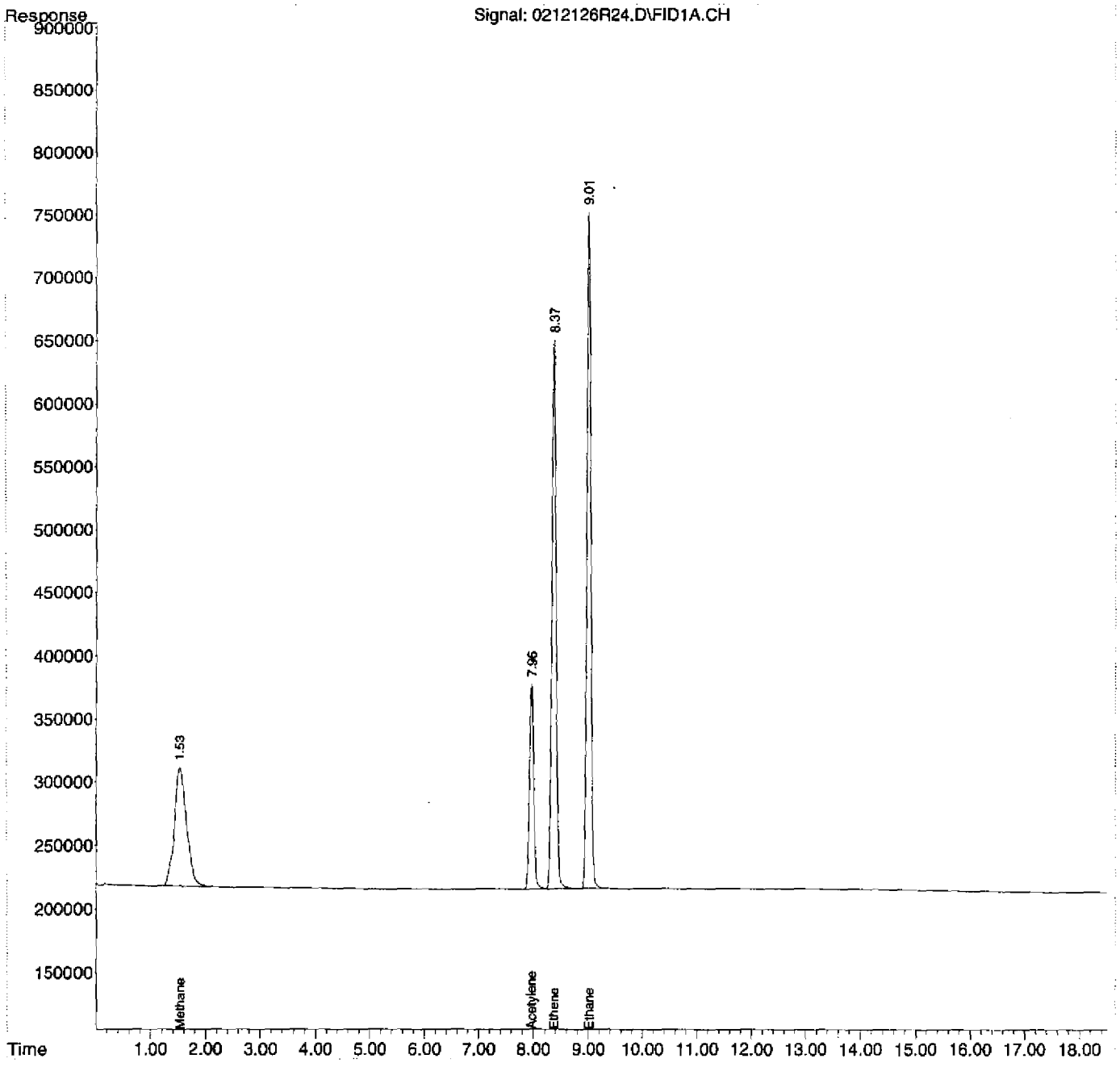
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\021212RSK\
Data File : 0212126R24.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 12 Feb 2012 10:57 pm
Operator : rh
Sample : 2020042-CCV2
Misc : 2B12004
ALS Vial : 24 Sample Multiplier: 1

Quant Time: Feb 13 09:55:17 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm



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Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\021212RSK\
Data File : 0212126R25.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 12 Feb 2012 11:24 pm
Operator : rh
Sample : 2020042-CCV3
Misc : 2B12004
ALS Vial : 25 Sample Multiplier: 1

Quant Time: Feb 13 09:55:25 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) S Acetylene	7.962	8241689	23.580 ug/L
Spiked Amount 66.330 Range 66 - 153		Recovery =	35.55%#
Target Compounds			
1) TM Methane	1.530	13840122	13.595 ug/L
3) TM Ethene	8.370	21820984	24.575 ug/L
4) TM Ethane	9.009	25026991	25.893 ug/L
5) Qual Propane	0.000	0	N.D.
6) Qual Butane	0.000	0	N.D.

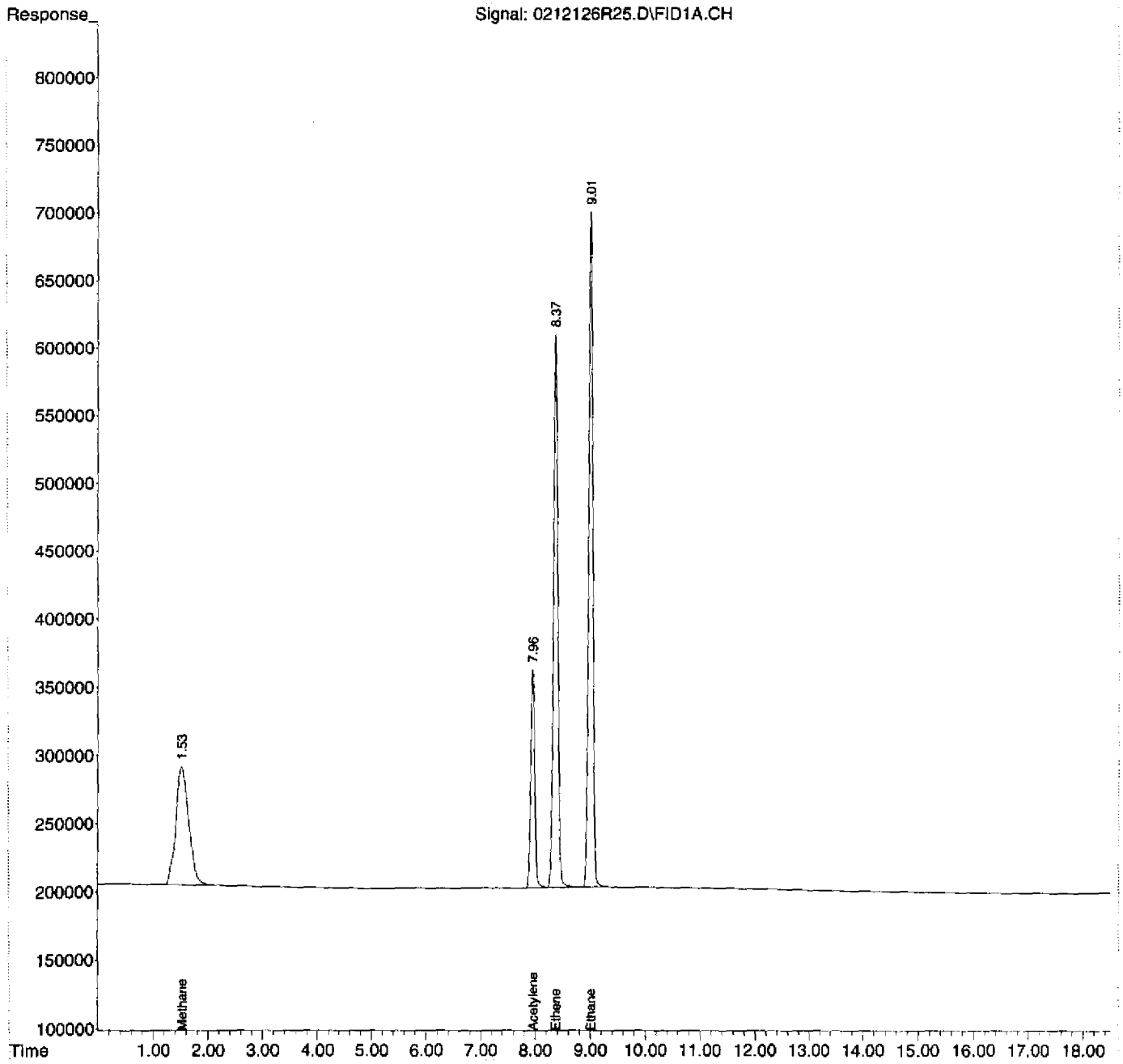
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\021212RSK\
Data File : 0212126R25.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 12 Feb 2012 11:24 pm
Operator : rh
Sample : 2020042-CCV3
Misc : 2B12004
ALS Vial : 25 Sample Multiplier: 1

Quant Time: Feb 13 09:55:25 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm



DIM0279585

DIM0279368

Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\021212RSK\
Data File : 0212126R26.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 12 Feb 2012 11:59 pm
Operator : rh
Sample : IB
Misc : 1L13003 LOT#109-14-06128-I1 — bad lot?
ALS Vial : 26 Sample Multiplier: 1

Quant Time: Feb 13 09:55:33 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) S Acetylene	7.958	25555282	73.116 ug/L
Spiked Amount 66.330 Range 66 - 153		Recovery =	110.23%
Target Compounds			
1) TM Methane	1.528	804760	0.791 ug/L
3) TM Ethene	0.000	0	N.D. ug/L
4) TM Ethane	0.000	0	N.D. ug/L
5) Qual Propane	0.000	0	N.D.
6) Qual Butane	0.000	0	N.D.

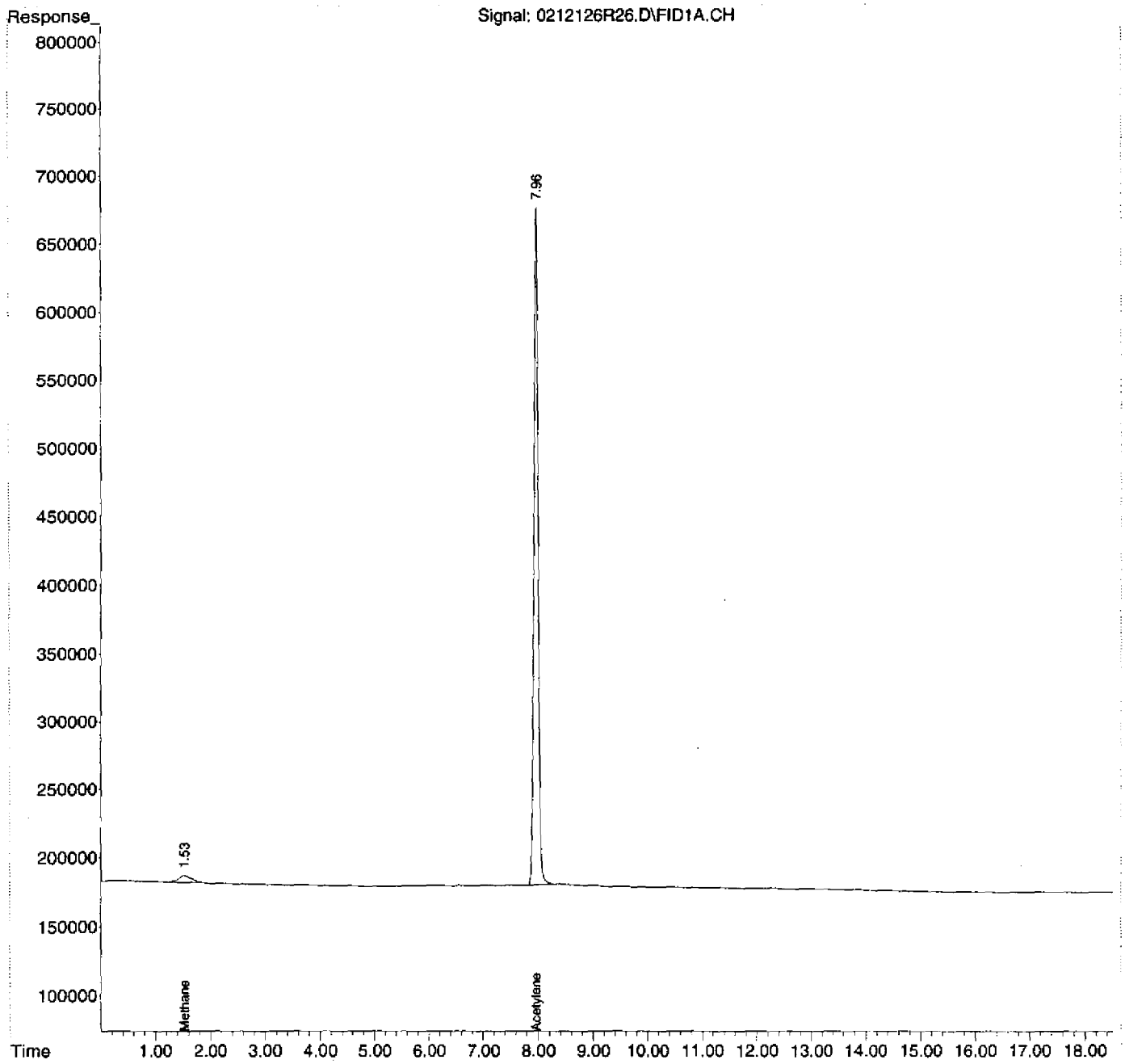
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\021212RSK\
Data File : 0212126R26.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 12 Feb 2012 11:59 pm
Operator : rh
Sample : IB
Misc : 1L13003 LOT#109-14-06128-I1
ALS Vial : 26 Sample Multiplier: 1

Quant Time: Feb 13 09:55:33 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm



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DIM0279368

Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\021212RSK\
Data File : 0212126R27.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 13 Feb 2012 12:25 am
Operator : rh
Sample : IB
Misc : 2B12005 LOT#109-14-06393-I5
ALS Vial : 27 Sample Multiplier: 1

Quant Time: Feb 13 09:55:41 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) S Acetylene	7.958	26811490	76.710 ug/L
Spiked Amount 66.330	Range 66 - 153	Recovery =	115.65%
Target Compounds			
1) TM Methane	0.000	0	N.D. ug/L
3) TM Ethene	0.000	0	N.D. ug/L
4) TM Ethane	0.000	0	N.D. ug/L
5) Qual Propane	0.000	0	N.D.
6) Qual Butane	0.000	0	N.D.

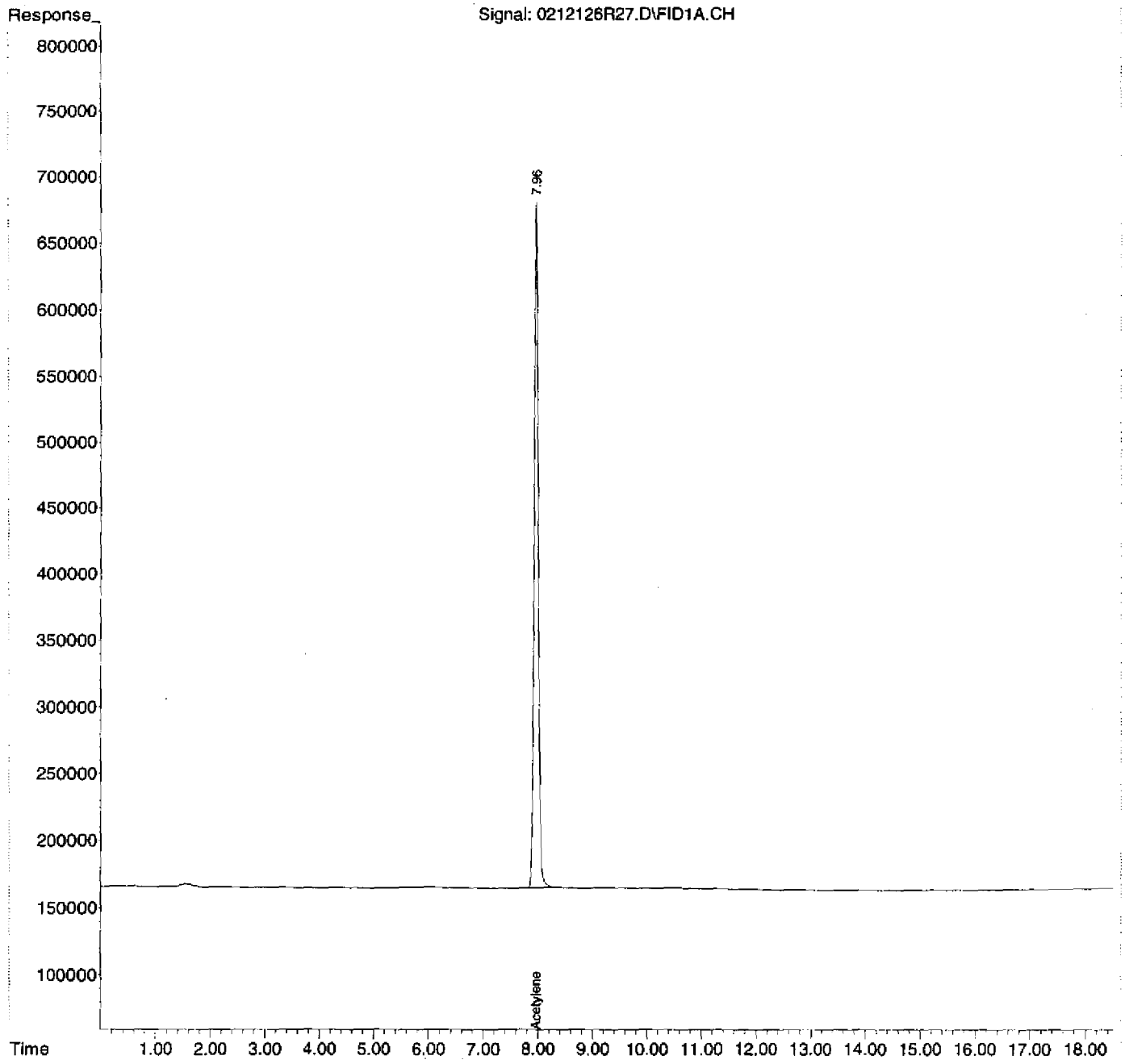
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\021212RSK\
Data File : 0212126R27.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 13 Feb 2012 12:25 am
Operator : rh
Sample : IB
Misc : 2B12005 LOT#109-14-06393-I5
ALS Vial : 27 Sample Multiplier: 1

Quant Time: Feb 13 09:55:41 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm



DIM0279589

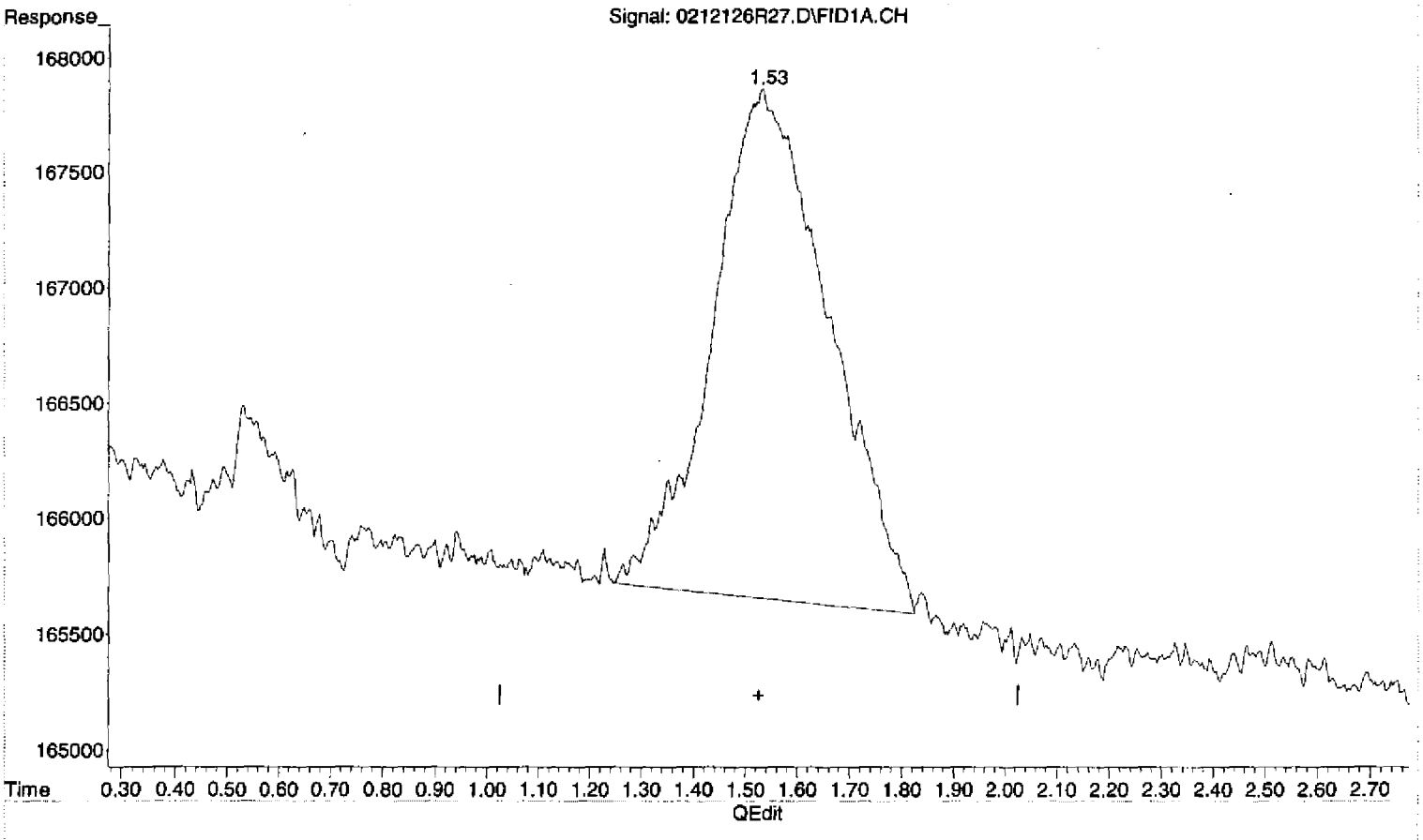
DIM0279368

Quantitation Report (Qedit)

Data Path : D:\MSDCHEM\1\2012\DATA\021212RSK\
Data File : 0212126R27.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 13 Feb 2012 12:25 am
Operator : rh
Sample : IB
Misc : 2B12005 LOT#109-14-06393-I5
ALS Vial : 27 Sample Multiplier: 1

Quant Time: Feb 13 09:55:41 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm



(1) Methane (TM)

1.53min 0.337ug/L m

response 343086

(+) = Expected Retention Time

DIM0279590

DIM0279368

Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\021212RSK\
Data File : 0212126R28.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 13 Feb 2012 12:52 am
Operator : rh
Sample : IB
Misc : SYRINGE PUNCTURE NO SURR
ALS Vial : 28 Sample Multiplier: 1

Quant Time: Feb 13 10:14:54 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) S Acetylene	0.000	0	N.D. ug/L
Spiked Amount 66.330 Range 66 - 153	Recovery =	0.00%#	
Target Compounds			
1) TM Methane	1.530	370706	<MDL ug/L m
3) TM Ethene	0.000	0	N.D. ug/L
4) TM Ethane	0.000	0	N.D. ug/L
5) Qual Propane	0.000	0	N.D.
6) Qual Butane	0.000	0	N.D.

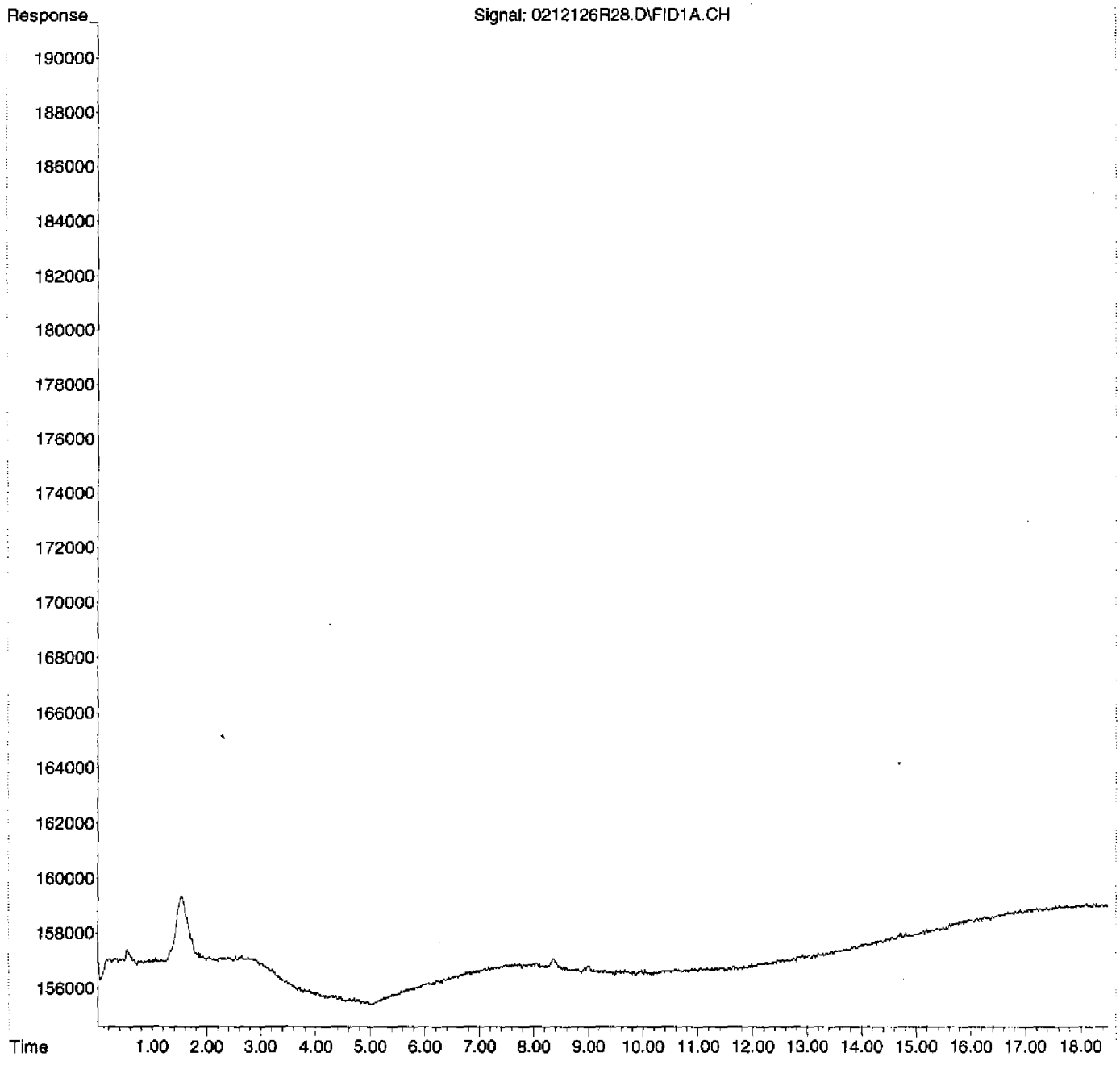
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : D:\MSDCHEM\1\2012\DATA\021212RSK\
Data File : 0212126R28.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 13 Feb 2012 12:52 am
Operator : rh
Sample : IB
Misc : SYRINGE PUNCTURE NO SURR
ALS Vial : 28 Sample Multiplier: 1

Quant Time: Feb 13 10:14:54 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm

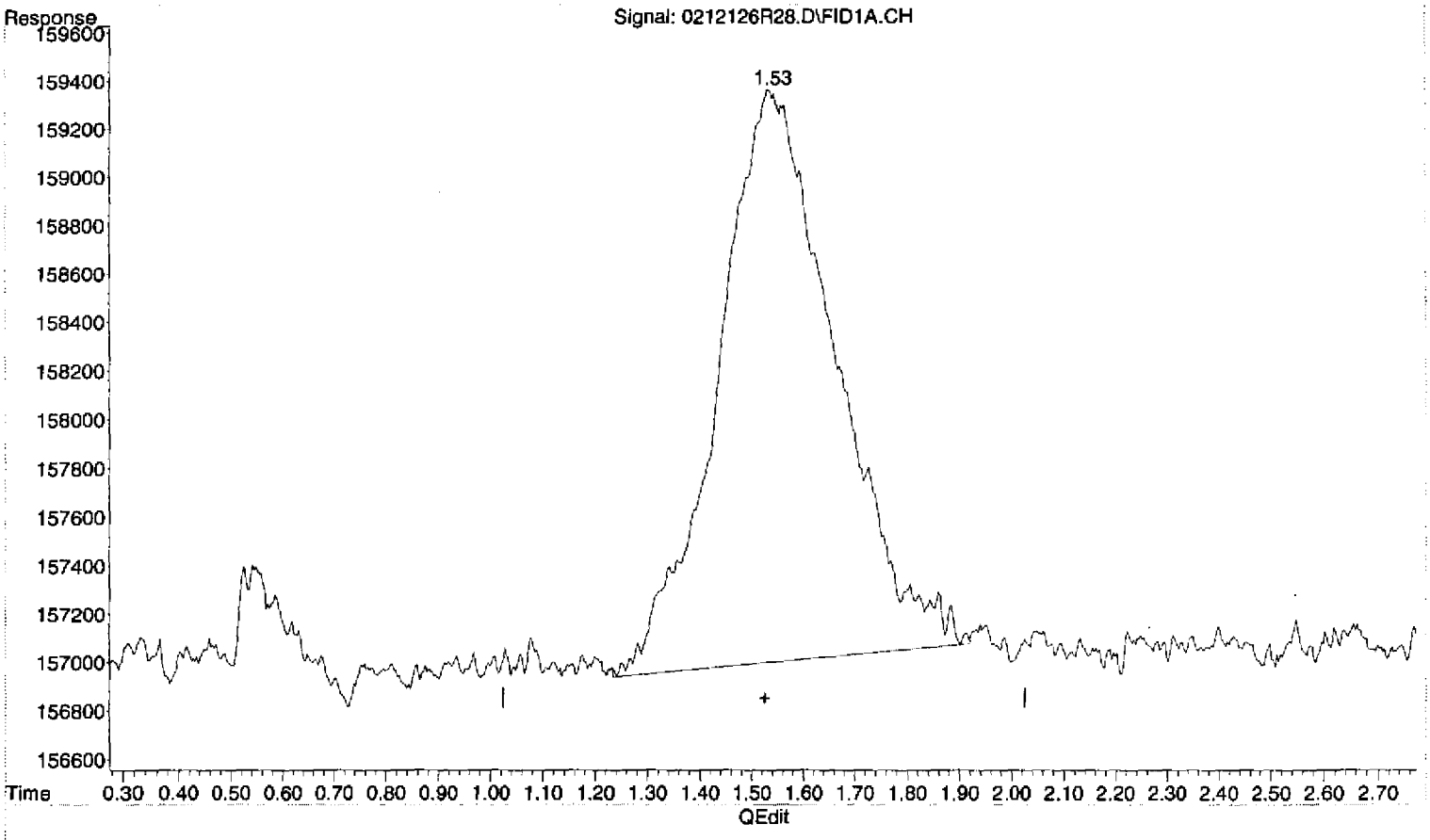


Quantitation Report (Qedit)

Data Path : D:\MSDCHEM\1\2012\DATA\021212RSK\
Data File : 0212126R28.D
Signal(s) : FID1A.CH
InstName : AG6890N-6
DataAcq Meth:0126126RSK.M
Acq On : 13 Feb 2012 12:52 am
Operator : rh
Sample : IB
Misc : SYRINGE PUNCTURE NO SURR
ALS Vial : 28 Sample Multiplier: 1

Quant Time: Feb 13 09:55:49 2012
Quant Method : D:\MSDCHEM\1\2012\METHOD\0126126RSK.M
Quant Title :
QLast Update : Fri Jan 27 11:26:56 2012
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 600 uL
Signal Phase : ShinCarbon ST
Signal Info : 1m x 0.75mm



(1) Methane (TM)

1.53min 0.364ug/L m

response 370706

(+) = Expected Retention Time
0126126RSK.M Mon Feb 13 10:14:59 2012

DIM0279593

DIM0279368

Standard Records

81789

MATHESON TRI-GAS INC
1650 Enterprise Pkwy
Twinsburg, OH 44087
1-215-648-4000

CERTIFICATE OF ANALYSIS

Alltech Associates
2051 Waukegan Road
Deerfield, Il 60015

0L07008

Ref Po# 4501647701

---

14 LITER DISPOSABLE

LOT NUMBER: 109-06-03881

COMPONENT	CONCENTRATION
Carbon Monoxide	1.003 %
Carbon Dioxide	0.999 %
Methane	0.994 %
Ethylene	1.007 %
Ethane	1.001 %
Acetylene	1.001 %
Nitrogen	Balance

AU003098

ITEM NUMBER: GMT10402TC

CGA: 160

PSIG: 240

FILL DATE: 9/2/10

EXPIRATION DATE: 09/02/12

Above are the results of the analysis you requested, as reported by our laboratory. Results are in mole percent, unless otherwise indicated. Mixture accuracy is ± 2%. NIST traceable by weights or gaseous standards.

Thomas J Purdon

Thomas Purdon, Plant Manager

9/10/2010

DATE

: 00200

01715

Analytical Standard Record

EPA Region 9 Laboratory

0L07008

Description:	RSK-175 HC Calibration Mix, Stock	**Expires:**	09/02/12
Standard Type:	Reference Material	**Prepared:**	09/02/10
Solvent:	Nitrogen	**Prepared By:**	** Vendor **
Final Volume (mls):	48000	**Department:**	Volatiles
Vials:	1	**Last Edit:**	12/07/10 10:27 by EM
Vendor:	Matheson	**Lot Numbe**	109-06-03881

Vendor: Matheson Tri-Gas GMT 10402TC, Lot # 109-06-03881, bar code AU003098

Analyte	CAS Number	Concentration (ppm)	SRM Control Limits
Methane	74-82-8	7.1	0-200
Ethene	74-85-1	12.6	0-200
Ethane	74-84-0	13.4	0-200
Carbon dioxide	124-38-9	19.6	0-200
Acetylene	74-86-2	11.6	0-200

00201

91711

AIR LIQUIDE Air Liquide America Specialty Gases LLC Scott

Shipped From:
6141 EASTON ROAD, BLDG 1 PO BOX 310
PLUMSTEADVILLE PA 18949-0310
Phone: 800-331-4953 Fax: 215-766-7226

CERTIFICATE OF ANALYSIS

SUPELCO
PO#P405616
SUPELCO PARK
595 NORTH HARRISON ROAD
BELLEFONTE PA 16823-0048

PROJECT #: 01-36433-003
PO#: P405616
ITEM #: 0104216 4
CUST ITEM #: 501662
DATE: 25Oct2010

ANALYTICAL ACCURACY: +/-2%
PRODUCT EXPIRATION: 24Oct2012

SCOTT LOT#: 029501E

COMPONENT	REQUESTED GAS CONC MOLES		ANALYSIS (MOLES)	
ACETYLENE	1.	%	1.00	%
CARBON DIOXIDE	1.	%	1.00	%
CARBON MONOXIDE	1.	%	1.01	%
ETHANE	1.	%	1.00	%
ETHYLENE	1.	%	1.00	%
METHANE	1.	%	1.01	%
NITROGEN		BALANCE		BALANCE

1H18014
Expires 10/24/12
Preparer:Tatyana Dadiomov 08 18 11

RSK-175 HYDROCARBON SCV

MANUFACTURED DATE: 25Oct2010

SCOTTY SIZE: 4

APPROVED BY: JAKE SENKOW

00202

01712

Analytical Standard Record

EPA Region 9 Laboratory

1H18014

Description:	RSK-175 HYDROCARBON SCV	**Expires:**	10/24/12
Standard Type:	Analyte Spike	**Prepared:**	08/18/11
Solvent:	Nitrogen	**Prepared By:**	Tatyana Dadiomov
Final Volume (mls):	4000	**Department:**	Volatiles
Vials:	1	**Last Edit:**	09/06/11 11:42 by YNB
Vendor:	Scott Specialty Gases	**Lot Numbe**	904001E

Supelco Cat # 501662, Scott Item # 01-04-216 --4, Inventory # AU001071

Analyte	CAS Number	Concentration (ppm)
Methane	74-82-8	7.21
Ethene	74-85-1	12.5
Ethane	74-84-0	13.4
Carbon dioxide	124-38-9	19.6
Acetylene	74-86-2	12

00203

01713

Analytical Standard Record

EPA Region 9 Laboratory

1L13003

Description:	RSK-175 Surrogate	**Expires:**	09/12/13
Standard Type:	Surrogate Spike	**Prepared:**	12/13/11
Solvent:	Helium	**Prepared By:**	** Vendor **
Final Volume (mls):	10000	**Department:**	Volatiles
Vials:	1	**Last Edit:**	12/13/11 10:16 by TD
Vendor:	Matheson	**Lot Numbe**	109-14-04897

Grace Cat # G0413, Item Nu: GMT10303TK AU003115

Analyte	CAS Number	Concentration (ppm)
Acetylene	74-86-2	10.7

00204

01714

MATHESON TRI-GAS INC
1650 Enterprise Pkwy
Twinsburg, OH 44087
1-215-648-4000

CERTIFICATE OF ANALYSIS

Alltech Associates
2051 Waukegan Road
Deerfield, Il 60015

Ref Po# 4501822881

MICROSOL 10 LITER DISPOSABLE

LOT NUMBER: 109-14-06128-I1

COMPONENT	CONCENTRATION
Acetylene	0.92 %
Helium	Balance

ITEM NUMBER: GMT10303TK

CGA: N/A

PSIG: 160 PSIG

FILL DATE: 9/12/11

EXPIRATION DATE: 09/12/13

Above are the results of the analysis you requested, as reported by our laboratory. Results are in mole percent, unless otherwise indicated. Mixture accuracy is ± 2%. NIST traceable by weights or gaseous standards.

Dave Drew, Chemist

9/14/2011
DATE

1L13003
Expires 09/12/13
Preparer ** Vendor ** 12 13 11
RSK-175 Surrogate

: 00205

01715

Analytical Standard Record

EPA Region 9 Laboratory

2A27003

Description:	RSK-175 HC PDS 012612	**Expires:**	01/28/12
Standard Type:	Reference Material	**Prepared:**	01/26/12
Solvent:	N2	**Prepared By:**	Bob Hopeman
Final Volume (mls):	21.5	**Department:**	Volatiles
Vials:	1	**Last Edit:**	01/27/12 10:40 by RFH
Vendor:	*Prepared*	**Lot Numbe**	N/A

Analyte	CAS Number	Concentration (ppm)	SRM Control Limits
Methane	74-82-8	0.33	0-200
Ethene	74-85-1	0.586	0-200
Ethane	74-84-0	0.623	0-200
Carbon dioxide	124-38-9	0.912	0-200
Acetylene	74-86-2	0.54	0-200

Parent Standards used in this standard:

Standard	Description	Prepared	Prepared By	Expires	Last Edit	(mls)
0L07008	RSK-175 HC Calibration Mix, Stock	09/02/10	** Vendor **	09/02/12	12/07/10 10:27 by EM	1

00206

81716

Analytical Standard Record

EPA Region 9 Laboratory

2A27004

Description:	RSK-175 ICAL Level 1 012612	**Expires:**	01/28/12
Standard Type:	Other Solution	**Prepared:**	01/26/12
Solvent:	N2	**Prepared By:**	Bob Hopeman
Final Volume (mls):	16.1	**Department:**	Volatiles
Vials:	1	**Last Edit:**	01/27/12 10:43 by RFH
Vendor:	*Prepared*	**Lot Numbe**	N/A

Analyte	CAS Number	Concentration (ppm)
Methane	74-82-8	0.000615
Ethene	74-85-1	0.00109
Ethane	74-84-0	0.00116
Carbon dioxide	124-38-9	0.0017
Acetylene	74-86-2	0.00101

Parent Standards used in this standard:

Standard	Description	Prepared	Prepared By	Expires	Last Edit	(mls)
2A27003	RSK-175 HC PDS 012612	01/26/12	Bob Hopeman	01/28/12	01/27/12 10:40 by RFH	0.03

00207

01717

Analytical Standard Record

EPA Region 9 Laboratory

2A27005

Description:	RSK-175 ICAL Level 2 012612	**Expires:**	01/28/12
Standard Type:	Other Solution	**Prepared:**	01/26/12
Solvent:	N2	**Prepared By:**	Bob Hopeman
Final Volume (mls):	16.1	**Department:**	Volatiles
Vials:	1	**Last Edit:**	01/27/12 15:38 by RFH
Vendor:	*Prepared*	**Lot Numbe**	N/A

Analyte	CAS Number	Concentration (ppm)
Methane	74-82-8	0.00123
Ethene	74-85-1	0.00218
Ethane	74-84-0	0.00232
Carbon dioxide	124-38-9	0.0034
Acetylene	74-86-2	0.00201

Parent Standards used in this standard:

Standard	Description	Prepared	Prepared By	Expires	Last Edit	(mls)
2A27003	RSK-175 HC PDS 012612	01/26/12	Bob Hopeman	01/28/12	01/27/12 10:40 by RFH	0.06

00208

01718

Analytical Standard Record

EPA Region 9 Laboratory

2A27006

Description:	RSK-175 ICAL Level 3 012612	**Expires:**	01/28/12
Standard Type:	Other Solution	**Prepared:**	01/26/12
Solvent:	N2	**Prepared By:**	Bob Hopeman
Final Volume (mls):	16.1	**Department:**	Volatiles
Vials:	1	**Last Edit:**	01/27/12 10:49 by RFH
Vendor:	*Prepared*	**Lot Numbe**	N/A

Analyte	CAS Number	Concentration (ppm)
Methane	74-82-8	0.0041
Ethene	74-85-1	0.00728
Ethane	74-84-0	0.00774
Carbon dioxide	124-38-9	0.0113
Acetylene	74-86-2	0.00671

Parent Standards used in this standard:

Standard	Description	Prepared	Prepared By	Expires	Last Edit	(mls)
2A27003	RSK-175 HC PDS 012612	01/26/12	Bob Hopeman	01/28/12	01/27/12 10:40 by RFH	0.2

00209

01719

Analytical Standard Record

EPA Region 9 Laboratory

2A27007

Description:	RSK-175 ICAL Level 4 012612	**Expires:**	01/28/12
Standard Type:	Other Solution	**Prepared:**	01/26/12
Solvent:	N2	**Prepared By:**	Bob Hopeman
Final Volume (mls):	16.1	**Department:**	Volatiles
Vials:	1	**Last Edit:**	01/27/12 10:48 by RFH
Vendor:	*Prepared*	**Lot Numbe**	N/A

Analyte	CAS Number	Concentration (ppm)
Methane	74-82-8	0.0132
Ethene	74-85-1	0.0235
Ethane	74-84-0	0.025
Carbon dioxide	124-38-9	0.0365
Acetylene	74-86-2	0.0216

Parent Standards used in this standard:

Standard	Description	Prepared	Prepared By	Expires	Last Edit	(mls)
0L07008	RSK-175 HC Calibration Mix, Stock	09/02/10	** Vendor **	09/02/12	12/07/10 10:27 by EM	0.03

00210

01728

Analytical Standard Record

EPA Region 9 Laboratory

2A27008

Description:	RSK-175 ICAL Level 5 012612	**Expires:**	01/28/12
Standard Type:	Other Solution	**Prepared:**	01/26/12
Solvent:	N2	**Prepared By:**	Bob Hopeman
Final Volume (mls):	16.1	**Department:**	Volatiles
Vials:	1	**Last Edit:**	01/27/12 10:51 by RFH
Vendor:	*Prepared*	**Lot Numbe**	N/A

Analyte	CAS Number	Concentration (ppm)
Methane	74-82-8	0.0441
Ethene	74-85-1	0.0783
Ethane	74-84-0	0.0832
Carbon dioxide	124-38-9	0.122
Acetylene	74-86-2	0.072

Parent Standards used in this standard:

Standard	Description	Prepared	Prepared By	Expires	Last Edit	(mls)
0L07008	RSK-175 HC Calibration Mix, Stock	09/02/10	** Vendor **	09/02/12	12/07/10 10:27 by EM	0.1

00211

01721

Analytical Standard Record

EPA Region 9 Laboratory

2A27009

Description:	RSK-175 ICAL Level 6 012612	**Expires:**	01/28/12
Standard Type:	Other Solution	**Prepared:**	01/26/12
Solvent:	N2	**Prepared By:**	Bob Hopeman
Final Volume (mls):	16.1	**Department:**	Volatiles
Vials:	1	**Last Edit:**	01/27/12 10:51 by RFH
Vendor:	*Prepared*	**Lot Numbe**	N/A

Analyte	CAS Number	Concentration (ppm)
Methane	74-82-8	0.11
Ethene	74-85-1	0.196
Ethane	74-84-0	0.208
Carbon dioxide	124-38-9	0.304
Acetylene	74-86-2	0.18

Parent Standards used in this standard:

Standard	Description	Prepared	Prepared By	Expires	Last Edit	(mls)
0L07008	RSK-175 HC Calibration Mix, Stock	09/02/10	** Vendor **	09/02/12	12/07/10 10:27 by EM	0.25

00212

01722

Analytical Standard Record

EPA Region 9 Laboratory

2A27010

Description:	RSK-175 ICAL Level 7 012612	**Expires:**	01/28/12
Standard Type:	Other Solution	**Prepared:**	01/26/12
Solvent:	N2	**Prepared By:**	Bob Hopeman
Final Volume (mls):	16.1	**Department:**	Volatiles
Vials:	1	**Last Edit:**	01/27/12 10:52 by RFH
Vendor:	*Prepared*	**Lot Numbe**	N/A

Analyte	CAS Number	Concentration (ppm)
Methane	74-82-8	0.22
Ethene	74-85-1	0.391
Ethane	74-84-0	0.416
Carbon dioxide	124-38-9	0.609
Acetylene	74-86-2	0.36

Parent Standards used in this standard:

Standard	Description	Prepared	Prepared By	Expires	Last Edit	(mls)
0L07008	RSK-175 HC Calibration Mix, Stock	09/02/10	** Vendor **	09/02/12	12/07/10 10:27 by EM	0.5

: 00213

01723

Analytical Standard Record

EPA Region 9 Laboratory

2A27011

Description:	RSK-175 SCV 012612	**Expires:**	01/28/12
Standard Type:	Other Solution	**Prepared:**	01/26/12
Solvent:	N2	**Prepared By:**	Bob Hopeman
Final Volume (mls):	16.1	**Department:**	Volatiles
Vials:	1	**Last Edit:**	01/27/12 10:59 by RFH
Vendor:	*Prepared*	**Lot Numbe**	N/A

Analyte	CAS Number	Concentration (ppm)
Methane	74-82-8	0.0448
Ethene	74-85-1	0.0776
Ethane	74-84-0	0.0832
Carbon dioxide	124-38-9	0.122
Acetylene	74-86-2	0.0721

Parent Standards used in this standard:

Standard	Description	Prepared	Prepared By	Expires	Last Edit	(mls)
1H18014	RSK-175 HYDROCARBON SCV	08/18/11	Tatyana Dadiomov	10/24/12	01/27/12 10:56 by RFH	0.1

00214

01724

Analytical Standard Record

EPA Region 9 Laboratory

2B08002

Description:	RSK-175 HC PDS 020812	**Expires:**	02/10/12
Standard Type:	Reference Material	**Prepared:**	02/08/12
Solvent:	N2	**Prepared By:**	Bob Hopeman
Final Volume (mls):	21.5	**Department:**	Volatiles
Vials:	1	**Last Edit:**	02/08/12 09:44 by RFH
Vendor:	*Prepared*	**Lot Numbe**	N/A

Analyte	CAS Number	Concentration (ppm)	SRM Control Limits
Methane	74-82-8	0.33	0-200
Ethene	74-85-1	0.586	0-200
Ethane	74-84-0	0.623	0-200
Carbon dioxide	124-38-9	0.912	0-200
Acetylene	74-86-2	0.54	0-200

Parent Standards used in this standard:

Standard	Description	Prepared	Prepared By	Expires	Last Edit	(mls)
0L07008	RSK-175 HC Calibration Mix, Stock	09/02/10	** Vendor **	09/02/12	12/07/10 10:27 by EM	1

00215

81725

Analytical Standard Record

EPA Region 9 Laboratory

2B08003

Description:	RSK-175 LCV1	**Expires:**	02/10/12
Standard Type:	Other Solution	**Prepared:**	02/08/12
Solvent:	N2	**Prepared By:**	Bob Hopeman
Final Volume (mls):	16.1	**Department:**	Volatiles
Vials:	1	**Last Edit:**	02/08/12 09:45 by RFH
Vendor:	*Prepared*	**Lot Numbe**	N/A

Analyte	CAS Number	Concentration (ppm)
Methane	74-82-8	0.000615
Ethene	74-85-1	0.00109
Ethane	74-84-0	0.00116
Carbon dioxide	124-38-9	0.0017
Acetylene	74-86-2	0.00101

Parent Standards used in this standard:

Standard	Description	Prepared	Prepared By	Expires	Last Edit	(mls)
2B08002	RSK-175 HC PDS 020812	02/08/12	Bob Hopeman	02/10/12	02/08/12 09:44 by RFH	0.03

00215

01726

Analytical Standard Record

EPA Region 9 Laboratory

2B08004

Description:	RSK-175 LCV2	**Expires:**	02/10/12
Standard Type:	Other Solution	**Prepared:**	02/08/12
Solvent:	N2	**Prepared By:**	Bob Hopeman
Final Volume (mls):	16.1	**Department:**	Volatiles
Vials:	1	**Last Edit:**	02/08/12 09:45 by RFH
Vendor:	*Prepared*	**Lot Numbe**	N/A

Analyte	CAS Number	Concentration (ppm)
Methane	74-82-8	0.00123
Ethene	74-85-1	0.00218
Ethane	74-84-0	0.00232
Carbon dioxide	124-38-9	0.0034
Acetylene	74-86-2	0.00201

Parent Standards used in this standard:

Standard	Description	Prepared	Prepared By	Expires	Last Edit	(mls)
2B08002	RSK-175 HC PDS 020812	02/08/12	Bob Hopeman	02/10/12	02/08/12 09:44 by RFH	0.06

00217

01727

Analytical Standard Record

EPA Region 9 Laboratory

2B08005

Description:	RSK-175 CCV	**Expires:**	02/10/12
Standard Type:	Other Solution	**Prepared:**	02/08/12
Solvent:	N2	**Prepared By:**	Bob Hopeman
Final Volume (mls):	16.1	**Department:**	Volatiles
Vials:	1	**Last Edit:**	02/08/12 09:45 by RFH
Vendor:	*Prepared*	**Lot Numbe**	N/A

Analyte	CAS Number	Concentration (ppm)
Methane	74-82-8	0.0132
Ethene	74-85-1	0.0235
Ethane	74-84-0	0.025
Carbon dioxide	124-38-9	0.0365
Acetylene	74-86-2	0.0216

Parent Standards used in this standard:

Standard	Description	Prepared	Prepared By	Expires	Last Edit	(mls)
0L07008	RSK-175 HC Calibration Mix, Stock	09/02/10	** Vendor **	09/02/12	12/07/10 10:27 by EM	0.03

00218

01728

Analytical Standard Record

EPA Region 9 Laboratory

2B09002

Description:	RSK-175 HC PDS 020912	**Expires:**	02/11/12
Standard Type:	Reference Material	**Prepared:**	02/09/12
Solvent:	N2	**Prepared By:**	Bob Hopeman
Final Volume (mls):	21.5	**Department:**	Volatiles
Vials:	1	**Last Edit:**	02/09/12 10:46 by RFH
Vendor:	*Prepared*	**Lot Numbe**	N/A

Analyte	CAS Number	Concentration (ppm)	SRM Control Limits
Methane	74-82-8	0.33	0-200
Ethene	74-85-1	0.586	0-200
Ethane	74-84-0	0.623	0-200
Carbon dioxide	124-38-9	0.912	0-200
Acetylene	74-86-2	0.54	0-200

Parent Standards used in this standard:

Standard	Description	Prepared	Prepared By	Expires	Last Edit	(mls)
0L07008	RSK-175 HC Calibration Mix, Stock	09/02/10	** Vendor **	09/02/12	12/07/10 10:27 by EM	1

00219

Analytical Standard Record

EPA Region 9 Laboratory

2B09003

Description:	RSK-175 LCV1	**Expires:**	02/11/12
Standard Type:	Other Solution	**Prepared:**	02/09/12
Solvent:	N2	**Prepared By:**	Bob Hopeman
Final Volume (mls):	16.1	**Department:**	Volatiles
Vials:	1	**Last Edit:**	02/09/12 10:47 by RFH
Vendor:	*Prepared*	**Lot Numbe**	N/A

Analyte	CAS Number	Concentration (ppm)
Methane	74-82-8	0.000615
Ethene	74-85-1	0.00109
Ethane	74-84-0	0.00116
Carbon dioxide	124-38-9	0.0017
Acetylene	74-86-2	0.00101

Parent Standards used in this standard:

Standard	Description	Prepared	Prepared By	Expires	Last Edit	(mls)
2B09002	RSK-175 HC PDS 020912	02/09/12	Bob Hopeman	02/11/12	02/09/12 10:46 by RFH	0.03

01738

Analytical Standard Record

EPA Region 9 Laboratory

2B09004

Description:	RSK-175 LCV2	**Expires:**	02/11/12
Standard Type:	Other Solution	**Prepared:**	02/09/12
Solvent:	N2	**Prepared By:**	Bob Hopeman
Final Volume (mls):	16.1	**Department:**	Volatiles
Vials:	1	**Last Edit:**	02/09/12 10:47 by RFH
Vendor:	*Prepared*	**Lot Numbe**	N/A

Analyte	CAS Number	Concentration (ppm)
Methane	74-82-8	0.00123
Ethene	74-85-1	0.00218
Ethane	74-84-0	0.00232
Carbon dioxide	124-38-9	0.0034
Acetylene	74-86-2	0.00201

Parent Standards used in this standard:

Standard	Description	Prepared	Prepared By	Expires	Last Edit	(mls)
2B09002	RSK-175 HC PDS 020912	02/09/12	Bob Hopeman	02/11/12	02/09/12 10:46 by RFH	0.06

00221

01731

Analytical Standard Record

EPA Region 9 Laboratory

2B09005

Description:	RSK-175 CCV	**Expires:**	02/11/12
Standard Type:	Other Solution	**Prepared:**	02/09/12
Solvent:	N2	**Prepared By:**	Bob Hopeman
Final Volume (mls):	16.1	**Department:**	Volatiles
Vials:	1	**Last Edit:**	02/09/12 10:47 by RFH
Vendor:	*Prepared*	**Lot Numbe**	N/A

Analyte	CAS Number	Concentration (ppm)
Methane	74-82-8	0.0132
Ethene	74-85-1	0.0235
Ethane	74-84-0	0.025
Carbon dioxide	124-38-9	0.0365
Acetylene	74-86-2	0.0216

Parent Standards used in this standard:

Standard	Description	Prepared	Prepared By	Expires	Last Edit	(mls)
0L07008	RSK-175 HC Calibration Mix, Stock	09/02/10	** Vendor **	09/02/12	12/07/10 10:27 by EM	0.03

00222

01732

Analytical Standard Record

EPA Region 9 Laboratory

2B12001

Description:	RSK-175 HC PDS 021212	**Expires:**	02/14/12
Standard Type:	Reference Material	**Prepared:**	02/12/12
Solvent:	N2	**Prepared By:**	Bob Hopeman
Final Volume (mls):	21.5	**Department:**	Volatiles
Vials:	1	**Last Edit:**	02/12/12 10:54 by RFH
Vendor:	*Prepared*	**Lot Numbe**	N/A

Analyte	CAS Number	Concentration (ppm)	SRM Control Limits
Methane	74-82-8	0.33	0-200
Ethene	74-85-1	0.586	0-200
Ethane	74-84-0	0.623	0-200
Carbon dioxide	124-38-9	0.912	0-200
Acetylene	74-86-2	0.54	0-200

Parent Standards used in this standard:

Standard	Description	Prepared	Prepared By	Expires	Last Edit	(mls)
0L07008	RSK-175 HC Calibration Mix, Stock	09/02/10	** Vendor **	09/02/12	12/07/10 10:27 by EM	1

00223

Analytical Standard Record

EPA Region 9 Laboratory

2B12002

Description:	RSK-175 LCV1	**Expires:**	02/14/12
Standard Type:	Other Solution	**Prepared:**	02/12/12
Solvent:	N2	**Prepared By:**	Bob Hopeman
Final Volume (mls):	16.1	**Department:**	Volatiles
Vials:	1	**Last Edit:**	02/12/12 10:55 by RFH
Vendor:	*Prepared*	**Lot Numbe**	N/A

Analyte	CAS Number	Concentration (ppm)
Methane	74-82-8	0.000615
Ethene	74-85-1	0.00109
Ethane	74-84-0	0.00116
Carbon dioxide	124-38-9	0.0017
Acetylene	74-86-2	0.00101

Parent Standards used in this standard:

Standard	Description	Prepared	Prepared By	Expires	Last Edit	(mls)
2B12001	RSK-175 HC PDS 021212	02/12/12	Bob Hopeman	02/14/12	02/12/12 10:54 by RFH	0.03

81734

Analytical Standard Record

EPA Region 9 Laboratory

2B12003

Description:	RSK-175 LCV2	**Expires:**	02/14/12
Standard Type:	Other Solution	**Prepared:**	02/12/12
Solvent:	N2	**Prepared By:**	Bob Hopeman
Final Volume (mls):	16.1	**Department:**	Volatiles
Vials:	1	**Last Edit:**	02/12/12 10:55 by RFH
Vendor:	*Prepared*	**Lot Numbe**	N/A

Analyte	CAS Number	Concentration (ppm)
Methane	74-82-8	0.00123
Ethene	74-85-1	0.00218
Ethane	74-84-0	0.00232
Carbon dioxide	124-38-9	0.0034
Acetylene	74-86-2	0.00201

Parent Standards used in this standard:

Standard	Description	Prepared	Prepared By	Expires	Last Edit	(mls)
2B12001	RSK-175 HC PDS 021212	02/12/12	Bob Hopeman	02/14/12	02/12/12 10:54 by RFH	0.06

00225

01735

Analytical Standard Record

EPA Region 9 Laboratory

2B12004

Description:	RSK-175 CCV	**Expires:**	02/14/12
Standard Type:	Other Solution	**Prepared:**	02/12/12
Solvent:	N2	**Prepared By:**	Bob Hopeman
Final Volume (mls):	16.1	**Department:**	Volatiles
Vials:	1	**Last Edit:**	02/12/12 10:55 by RFH
Vendor:	*Prepared*	**Lot Numbe**	N/A

Analyte	CAS Number	Concentration (ppm)
Methane	74-82-8	0.0132
Ethene	74-85-1	0.0235
Ethane	74-84-0	0.025
Carbon dioxide	124-38-9	0.0365
Acetylene	74-86-2	0.0216

Parent Standards used in this standard:

Standard	Description	Prepared	Prepared By	Expires	Last Edit	(mls)
0L07008	RSK-175 HC Calibration Mix, Stock	09/02/10	** Vendor **	09/02/12	12/07/10 10:27 by EM	0.03

00226